Evaluation of the Alberta Health AIDS/STD Information Line

Prepared for
Alberta Health
by Alberta
Management Group

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Alberta
HEALTH

EVALUATION OF THE ALBERTA HEALTH AIDS/STD INFORMATION LINE

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Edmonton, Alberta

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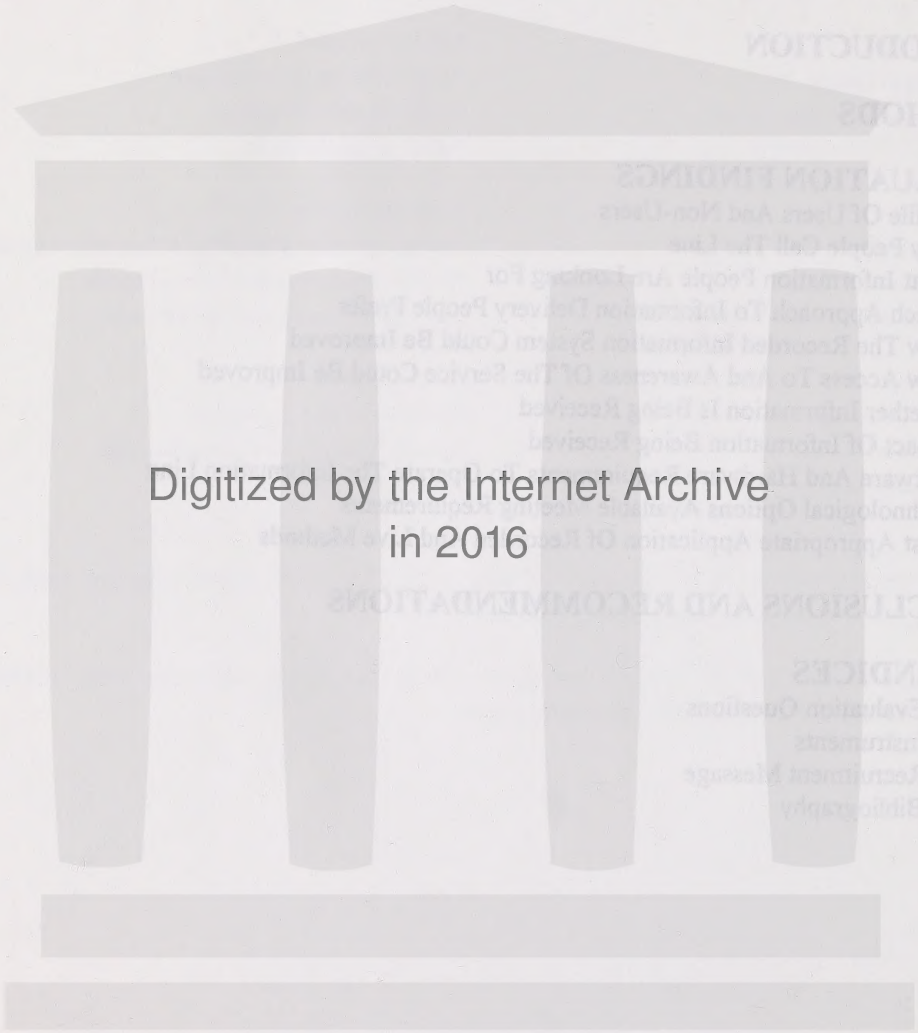

EXECUTIVE SUMMARY

An AIDS Information Line was established by Alberta Health in 1987 in recognition of the need to provide the public with a confidential, anonymous and accessible source of information on AIDS. The service was expanded in 1990 to provide information on Sexually Transmitted Diseases (STD). The service currently provides information via two methods:

- Recorded Information - Callers to the Information Line are initially greeted by a recorded message. The system allows callers to use their telephone touch-tone keypad to select general or detailed messages from a menu of AIDS/STD topics.
- Live Information - The recorded message system also provides callers with a second number to phone if they wish to discuss their situation in more detail with a Nurse Educator (during business hours).

An evaluation of the service was undertaken to determine the public's awareness of the Information Line, the impact of the information being provided, as well as technological options for providing service in the future.

Methods

Ten evaluation questions guided the research. Data sources and methods included:

1. Telephone surveys with 101 users of the Information Line. Of these, 20 were recruited by Nurse Educators and 81 by a message added to the recorded information system;
2. Random telephone surveys of 120 residents aged 16 to 50 across the province;
3. A group interview with the six Nurse Educators answering calls in Edmonton and Calgary;
4. Telephone interviews with three vendors of telephone messaging hardware and software;
5. Telephone interviews with representatives of ten other information lines in Canada;
6. A review of the literature regarding health-related telephone lines in other jurisdictions.

Survey instruments and recruitment procedures were pilot-tested prior to use in the main study.

Results

The following conclusions are made about the AIDS/STD Information Line:

- There is widespread support for an anonymous telephone information service to provide the public with access to information on AIDS and STD.
- Alberta Health enjoys strong credibility in providing this service.
- Public awareness of the Information Line is highest among those practicing risky behaviours. Findings underscored the importance of publishing the toll-free number in telephone books because many look there for service when the need arises. Mass media

approaches (particularly television) are supported as an effective way to inform the public of the service.

- Non-users are not active information seekers and few report practicing risky behaviours. Information of interest to them is readily available from the Information Line.
- Use of the Information Line in Alberta is similar to other jurisdictions in terms of who calls, why they call, how often they call and what information or assistance they are looking for.
- The Information Line is mainly being used by people who see themselves at risk of infection. Users tend to be young, and over half reported practicing a behaviour that put them at risk of infection in the last 12 months. Users are also less well educated and more likely to report practicing risky behaviours than their non-user peers. Females use the service somewhat more than males, and are on average younger and more likely to consider themselves at risk than male users.
- Some callers use the service for disease prevention, looking for ways they can protect themselves from infection. Most users, however, called at the time they had a "problem" (e.g., a symptom or concern about a past behaviour), and most only called once. This suggests the Information Line is not actively used as a source of health promotion information; rather, it is being used primarily as a health assessment and referral service, and appears to be serving as an important link to treatment for symptomatic people. Some who urgently require reassurance and advice also use it as a "crisis line".
- Many users know of alternative sources of information and assistance but prefer the Information Line because it is convenient and anonymous. Rural residents were most likely to suggest they had no other alternatives. This finding confirms and supports the importance of the Information Line for residents outside major urban centres.
- The majority of users of the Information Line found the service to be helpful. They said they were reassured, better informed and better able to make decisions. Most indicated they intended to take action as a result of the information they had received. These actions included seeking service or additional information, making a behaviour change or sharing information with others.
- Both live and recorded methods of delivering information are supported in Alberta. Most people expect and prefer talking to a person, but many appeared to like the option of using recorded messages, and most felt recorded messages are a good way to provide information on AIDS and STD. This "dual" delivery approach appears to differ from that taken by most other information lines in Canada and elsewhere; however, there is clear evidence that some users have strong preferences for one method over the other. This finding suggests that a single method would not adequately serve as broad a range of potential users.

- While there is a high level of satisfaction with the service provided by Nurse Educators, the exclusive use of nurses may not be essential. Most users are mainly concerned that the person providing the information be well-trained in the subjects and issues involved and do not insist upon formal medical training.
- Most callers try to use the recorded information system to access messages, particularly individuals from outside of Edmonton. Most also listen to one or more detailed messages. These findings underscore the importance of ensuring the system provides quick access to useful information.

  Unfortunately, two-thirds of those who used the recorded information system did not find what they were looking for, even those accessing more than one detailed message. A significant number had trouble using the system, or found it failed when they attempted to make selections. This is considered unacceptable for a service of this importance and volume of use.

  The recorded information system is nearing technical obsolescence. It is difficult to maintain, cumbersome to revise and increasingly prone to failure. It is unable to adequately meet the message giving and statistical requirements of the program. State-of-the-art technology can be acquired locally at a reasonable cost (i.e., under $10,000).

In summary, the AIDS/STD Information Line provides a valuable service to Albertans at risk of infection or currently symptomatic. The dual method of information delivery is appropriate and should be continued and improved.

Recommendations

We make the following recommendations in relation to the Recorded Information Service:

1. Alberta Health should replace the existing computer system as soon as possible with state-of-the-art technology. The new system should provide enhanced message-giving and statistical reporting capabilities, and permit greater integration between live and recorded methods of information delivery. Specifically, it should:
   - allow callers to be passed directly to a Nurse Educator by pressing a button on their phones without having to hang up and call another number;
   - permit Nurse Educators to connect callers directly to appropriate recorded messages, and, after they have finished listening, reconnect them with the Nurse Educator if they wish to discuss matters further;
   - allow callers holding for a Nurse Educator to access messages;
   - permit callers to leave messages regarding their satisfaction with the recorded or live information services
   - permit callers, when Nurse educators are unavailable, to leave questions in a private voice mail box with a computer-assigned number. Nurse Educators would leave answers in mail boxes for callers to retrieve at a convenient time.

2. Alberta Health should ensure that the toll-free number for the Information Line is prominently displayed in all telephone directories in the province.

3. Printed materials (including directory listings/advertisements) should provide an overview of recorded messages available to enable callers to more easily choose from message alternatives.

4. Messages should be delivered in a more lively and interesting style. Consideration should also be given to expanding the menu system to provide messages targeting specific sub-groups (e.g., male/female, adolescent/adult), with message content and style tailored to the unique situations and needs of each group.

We make the following recommendations in relation to the Live Information Service:

5. Alberta Health should consider extending live service into the evening hours, and possibly eliminate morning or early morning coverage.

6. Alberta Health should consider using paid non-medical staff to supplement or complement Nurse Educators. In addition to handling their share of calls, Nurse Educators would back up non-medical staff in situations where signs and symptoms are being discussed.

7. In addition to providing facts and information, Nurse Educators should consider employing a more direct counselling approach. This might also include telephone follow-up, when appropriate.

INTRODUCTION

The Information Line was originally established in 1987 in recognition of the need to provide the general public across Alberta with a freely accessible source of information on AIDS. While AIDS information was available from community AIDS organizations in Edmonton and Calgary, it was felt that residents outside of the major centres had fewer sources for such information.

Initially, a single toll-free line was installed, and calls were taken by STD Services Nurse Educators during normal business hours. In November of 1988, Alberta Health installed microcomputer hardware and software to operate a 24-hour interactive recorded information service on a single toll-free line to complement the Nurse Educator service. A second system and line were installed in 1989.

In November of 1990, service was expanded to include information on Sexually Transmitted Diseases as well as AIDS, and the service became known as the AIDS/STD Information Line. The service has operated in its present fashion ever since that time.

An evaluation of the Information Line was required to address the following key issues:

1. Awareness of and access to the service by the public;
2. The impact of information being received by users of the service;
3. Technological options for providing service to the public in the future.

The study was intended to provide recommendations on how the Information Line could be improved to better meet the needs of those rely on it for information on AIDS and Sexually Transmitted Diseases.

A Steering Committee was established by Alberta Health to select and guide the consultants in conducting the evaluation. The study commenced in November, 1992.

METHODS

A set of ten evaluation questions (Appendix A) was developed based on issues initially laid out in the project Terms of Reference and subsequent discussions with members of the Steering Committee. The evaluation questions were intended to focus data collection efforts on the issues of greatest concern, and also to provide a framework for organizing the presentation of findings in this report. Evaluation questions addressed the following major issues:

- Access and Awareness - who is using the information line, how users learned about the service, what approach they prefer and how access, awareness and service could be improved;
- Impact - whether information is being received and acted upon, and with what effects;
- Technology - the future requirements and technological options to provide recorded information, and the possible applications of technology to deliver disease prevention and health promotion information.

Based on the evaluation questions, data sources and methods were established, draft instruments were prepared and approved, and a pilot was undertaken to test recruitment methods and instruments. Instruments were finalized (see Appendix B) and data collection was started in January of 1993.

DATA SOURCES AND METHODS

The following data sources and data collection methods were used.

Service Users

The Steering Committee stressed the importance of gathering the views of users of the service and requested that a minimum of 100 users be interviewed. Service users include those who called STD Services Nurse Educators, and those who used (or attempted to use) the recorded information system. The Committee was particularly interested in hearing from individuals accessing recorded information. Although the recorded information system provides statistics on the usage of specific messages, little was known about who listened to these messages, how they viewed these messages, and what impact the information was having on them, if any. Consequently, 80% of the sample was to be taken from users of the recorded information system and 20% from users of the Nurse Educator service.

It was recognized that it would be difficult to recruit users of the recorded information system, since their calls could not be intercepted, and the anonymous nature of the service precluded tracing their calls to conduct follow-up interviews. A number of alternatives were discussed, and a decision was made to attempt to recruit users of the recorded information system by inserting

temporary recruitment messages directly onto the recorded system asking users to call the consultants at another toll-free number[1].

It was decided to try recruiting users of the Nurse Educator service by having the Nurse Educators themselves, at the end of their telephone conversations, ask clients to call the consultants at their toll-free number. These users were screened by the Nurse Educators to provide roughly equal numbers of males and females.

These two recruitment approaches and related instruments were pilot tested in December, 1992 and January, 1993. Slightly over 50% of users recruited by the Nurse Educators responded by calling the consultants. In view of the imposition on callers to call another number to be interviewed, this response was considered favourable enough to continue this recruitment procedure in the main study.

Only about 5% of users of the recorded information system called the consultants during the pilot test. Such a low response rate compromises the ability to generalize survey results to the larger population of users; however, no other alternatives could be found to increase the response rate that would not also compromise user anonymity. Consequently, it was decided to continue with this recruitment procedure in the main study, although a more personal recruitment message[2] was placed on the recorded system in an attempt to encourage a higher response rate.

A total of 101 service users were interviewed:

1. Service Users - Recorded Information System

   Recruitment went on for approximately three weeks using the temporary message placed on the recorded information system. Eighty-one (81) users were interviewed. Response rates were as follows:

Total Calls To 1-800 Line	1,558
Interviews Completed[3]	81
Response Rate	5%

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1 The consultant temporarily established a toll-free number for use during the data collection period. Call Forward and Voice Message services were also purchased for the toll-free line so that evening and week-end calls from users could be forwarded to the interviewer's home, and callers at night could be asked to call again in the morning. Accepting evening and week-end calls significantly shortened the period of time necessary to achieve the desired number of user completions, and also helped to gather the views of that population of individuals who are known to use the system outside of regular office hours.

2 A female voice was used (that of the interviewer who would do the actual interview), with a more direct and personal style (see Appendix C for exact script used).

3 This number excludes approximately 50 calls received on the toll-free line when the researcher was not available to take the call (e.g., after 10:00 pm).

The low response rate was anticipated based on results from the pilot test. Readers should be cautioned that findings from the sample cannot be generalized to the entire population of service users. The views of users who chose to call the consultants cannot be assumed to represent the views of those who chose not to call. Findings are reported, however, in the interests of informing the program of the views of some of its users to aid in decision-making about possible enhancements to the service.

2. Service Users - Nurse Educator Service

Recruitment went on for approximately one week through the Nurse Educators. Twenty (20) users were interviewed. Response rates were as follows:

	Male	Female	Total
Total Calls to Nurse Educators	33	27	60
Callers Not Asked[4]	7	5	12
Callers Already Interviewed[5]	7	0	7
Callers Asked	19	22	41
Callers Refusing or Unsure	4	4	8
Callers Agreeing To Interview	15	18	33
Callers Interviewed	10	10	20
Response Rate[6]	53%	45%	49%

Non-Users

Since the Information Line is intended to serve the entire province, the Steering Committee also stressed the importance of reaching other Albertans who have not used the service to see if they are aware of the service and have information needs that could be met by the service.

A sample of at least 100 non-users was desired. Geographic quotas[7] were established as follows:

- Calgary (20%)
- Edmonton (20%)
- Rest of Alberta (60%)

The sample was to include roughly equal numbers of males and females, and was to be stratified by age as follows:

- 16 - 20 (40%)
- 21 - 30 (30%)
- 31 - 40 (20%)
- 41 - 50 (10%)

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4 Not considered appropriate by Nurse Educators.

5 Recruited through recorded message system.

6 Based on total asked who had not already been interviewed.

7 The large sample of "rural" residents recognizes the long-standing priority placed by the Information Line on meeting the needs of residents outside the major urban centres.

The larger proportion of younger residents in the sample was chosen to reflect the priority placed by the Information Line on meeting the needs of those most likely to be practicing risky behaviours.

A random sample of 2000 telephone numbers was generated by the Population Research Laboratory at the University of Alberta. Numbers were called three times at different times of the day before being abandoned.

A total of 120 non-users from across Alberta were surveyed. Response rates were as follows:

Numbers Called	992
Business/Fax Numbers	(74)
Numbers Not In Service	(254)
No Answer (3 calls)	(111)
Did Not Meet Criteria[8]	(381)
Total Households	172
Refusals[9]	(52)
Agreed/Completed	120
Response Rate	70%

This response rate is typical of telephone surveys, and the results obtained can be used with some confidence to generalize about the non-user population.

In addition to survey data collection, additional sources of information included:

Nurse Educators

A group interview was conducted with all STD Services Nurse Educators from Edmonton (4) and Calgary (2) responsible for responding to calls from the public. The interviews centered on issues relevant to the evaluation questions.

Vendors

Interviews were conducted with representatives of 3 companies supplying automated telephone messaging hardware and software. Interviews focused on costs and capabilities of current technologies. System requirements were obtained in an interview with the STD Services Information Line supervisor and the network analyst assigned to support the system.

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8 No one living in residence meeting the specific age and gender criteria assigned to that phone number.

9 It should be noted that the interviewer conducting the survey of non-users was English-speaking. A small proportion of the 52 refusals encountered was directly related to difficulties communicating with non-English-speaking respondents regarding the nature of the survey and the screening criteria. These calls were terminated and counted as refusals.

Other Information Lines in Canada

Interviews were conducted with ten other information lines in Canada, including:

- seven provincial information lines (four operated by provincial ministries and three by community non-profit agencies):
  - British Columbia - Ministry of Health
  - Manitoba - Department of Health
  - Ontario - Ministry of Health
  - Yukon - Ministry of Health
  - Newfoundland - Newfoundland/Labrador AIDS Committee
  - Nova Scotia - AIDS Nova Scotia
  - Saskatchewan - AIDS Saskatoon
- three local information lines in Edmonton:
  - Power 92 Radio Station
  - Health Information Society
  - AIDS Network of Edmonton.

Interviews centered on issues relevant to the evaluation questions.

Literature

Finally, the professional literature was reviewed for current trends in the use of information lines to provide disease prevention and health promotion information (see Appendix D - Bibliography). The review focused on gathering insight into issues that pertained to the evaluation questions.

DATA ANALYSIS AND REPORTING

Interviews were summarized and analyzed manually for themes or trends. Surveys were analyzed quantitatively. In preparing demographic data from the surveys, an Alberta map was used to assign responses from communities outside of Edmonton of Calgary to locations defined by lines drawn through Edmonton and Calgary splitting the province into three regions: *North of Edmonton*, *Central* and *South of Calgary*. Population figures for Alberta communities (Alberta Municipal Affairs) were also used to assign responses to the following community types: *Rural:* <10,000; *Small City*: >10,000 (excluding Edmonton and Calgary); *Large City*: Edmonton and Calgary; *Native*: communities with predominantly native populations, regardless of size.

NOTE: The findings from each source of data above are presented in the next section of the report, organized according to the evaluation questions to which the findings pertain. Findings from the literature and other information lines in Canada have been presented in appropriate sections of the report along with data from the other sources, rather than being reported in separate chapters, as is the convention. These reviews were not intended to serve as "stand-alone" reference reports; rather, they were conducted specifically to provide additional insight into specific evaluation issues from an outside perspective.

EVALUATION FINDINGS

WHAT IS THE PROFILE OF INFORMATION LINE USERS AND NON-USERS?

Summary

A greater proportion of females than males call the Information Line (56%), particularly in the age group under 21. The majority of users are adults under 41, with a mean age of 27.5. Younger people, including adolescents (i.e., under 18), appear somewhat more likely to use the recorded information service than the Nurse Educator service.

Users tend to have low levels of education (i.e., high school diploma or less). They come from all over the province, and as many come from large cities as from rural communities. Users from Central Alberta appear to be over-represented in proportion to the population of this area, while users from Edmonton and Calgary are somewhat under-represented. Over half of the users reported practicing a behaviour in the last 12 months that put them at risk of AIDS or STD infection. Female users were somewhat more likely than males to report practicing a risky behaviour in the last 12 months.

In comparison to service users, non-users tended to have higher levels of education and were much less likely to report having practiced a risky behaviour in the last 12 months. The majority of non-users also felt they knew everything they needed to about AIDS and STD. This would suggest that the line tends to attract those who are most likely to need the service - those less educated and particularly those reporting risky behaviours.

Survey

The demographic profile of service users and non-users is provided in the table on the following page[10].

The majority of service users (89%) were under 41, with a mean age of 27.5. Users aged 21 - 30 were most prevalent overall (39%) although a substantial number were also under 21 (31%). In a separate analysis, it was found that the mean age of users of the recorded information system was 27.0 compared to 29.7 for users of the Nurse Educator service. Furthermore, a greater proportion of users of the recorded information system were adolescents (26% vs 10%), suggesting younger individuals are somewhat less likely to call the Nurse Educators[11].

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10 The surveys did not gather extensive demographic data that would allow comparisons based on other characteristics beyond those contained in the table. For example, ethnicity, family status and income were not considered relevant. Specific questions about injection drug use and sexual orientation were not asked

11 Adolescents are defined as those under 18 years of age. Younger individuals who are in school may find it more difficult than others to call the Nurse Educators during business hours, and they may be more inhibited talking to a person about their situation than older individuals.

TABLE 1
DEMOGRAPHIC PROFILE OF USERS AND NON-USERS

CHARACTERISTIC	SERVICE USERS			NON-USERS[12]		
	Male (n=44)	Female (n=57)	Total (n=101)	Male (n=57)	Female (n=63)	Total (n=120)
Age	%	%	%	%	%	%
< 21	18	40	31	39	33	36
21 - 30	48	32	39	33	41	38
31 - 40	18	21	20	18	18	18
41 - 50	7	4	5	11	8	9
> 50	9	4	6	0	0	0
Education						
< Grade 12	39	39	39	30	14	22
High School Diploma	30	21	25	44	40	42
Trade/Tech. Certification	0	5	3	4	0	2
Some Post-Secondary	11	18	15	9	18	13
Completed Post-Secondary	21	18	19	14	29	22
Location						
North of Edmonton	23	21	22	16	14	15
Edmonton	30	12	20	26	21	23
Central	23	35	30	27	29	28
Calgary	16	23	20	20	25	23
South of Calgary	9	9	9	11	11	11
Community Type						
Rural Community	32	46	40	30	37	33
Small City	14	18	16	28	18	23
Large City	46	35	40	42	46	44
Native Community	9	2	5	0	0	0
Risky Behaviour (12 Mo.)[13]						
Yes	51	60	55	7	11	9
No	49	41	45	93	89	91

[12] Specific gender, age and location quotas were established for recruitment of non-users. The results will not necessarily reflect provincial demographics.

[13] Respondents were asked if, in the last 12 months, they had practiced unsafe sex or needle use. If requested, the interviewer provided additional explanation of behaviours considered risky (see Appendix B).

Two-thirds (67%) of service users have less than post-secondary education. Those with less than a high school education were most prevalent (39%). As many users came from large cities (40%) as from rural communities (40%). More than half (55%) of users reported practicing a risky behaviour in the last 12 months[14].

Population statistics for Alberta communities were analyzed to determine whether users were distributed in proportion to the actual populations in each region. The results are as follows:

Location	Users (%)	Population (%)
North of Edmonton	22	21
Edmonton	20	25
Central	30	16
Calgary	20	28
South of Calgary	9	10

It appears that Edmonton and Calgary users may be under-represented in relation to the populations of these communities, while users in Central Alberta may be significantly over-represented. Users in southern and northern areas of the province appear to be represented in proportion to their populations. Residents in Edmonton and Calgary may have more service alternatives, and hence may rely less on the Information Line than others in the province. No explanation can be given for the apparently higher use of the service by residents in Central Alberta.

When looking at gender differences among users who called the researcher, females were somewhat more prevalent than males overall (56% vs 44%). They were slightly younger than males overall (mean age of 26.0 vs 29.5), and proportionately more prevalent in the age group under 21 (40% vs 18%), in rural communities (46% vs 32%) and in central Alberta (35% vs 23%). They were also somewhat more likely than males to report having practiced a risky behaviour in the last 12 months (60% vs 51%). Males were more prevalent in the 21 - 30 age group (48% vs 32%), in Edmonton (30% vs 12%) and in large cities (46% vs 35%).

By design, non-users were screened for location, age and sex, resulting in few gender differences in most strata except education, where male respondents tended to have lower levels of education. For example, proportionately more males than females had less than a high school education (30% vs 14%) and fewer had completed post secondary education (14% vs 29%). Marginally more females than males reported practicing a risky behaviour in the last 12 months (11% vs 7%).

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[14] Twenty-five (25) users did not respond when asked if they had practiced risky sex or needle use in the last 12 months. Of the total sample of users (101), 42% reported practicing a risky behaviour in the last 12 months. This result is similar to findings in the study *Listening To Albertans At Risk Of HIV/AIDS: An Assessment of Risk Reduction Messages* (Alberta Health, 1992) which specifically targeted those who were more likely to practice risky behaviours (agency clients, bar patrons). The study found that 40% of respondents reported practicing a risky behaviour in the last 12 months.

The user sample was quite similar to the non-user sample in most strata (i.e., age, gender, location) except education and risk behaviour. While users tended on average to be slightly older than non-users (mean age of 27.5 vs 26.3), fewer had completed high school (25% vs 42%). Users were also more likely than non-users to report practicing a risky behaviour in the last 12 months (55% vs 9%). Clearly, then, users of the Information Line (who called the researcher) differ from their non-user peers in the general population in important dimensions of education and risk status.

Nurse Educators

Statistics maintained by Nurse Educators indicate that slightly more females (approximately 55%) call the line now, a reversal from the early years when calls from males were somewhat more prevalent. Callers are approximately equally split between the 18 - 29 and 30 - 49 age groups. The Nurse Educators indicated they receive few calls from adolescents (i.e., < 18). Some felt younger people may prefer to use the recorded information system rather than talking to a person.

Nurse Educators feel the vast majority of callers are currently practicing risky behaviours, typically unprotected sex, including a significant number who engage in unprotected anal sex.

Other Information Lines in Canada

Other information lines in Canada do not regularly collect formal user demographic statistics. While all the information lines are available to the general public, the image and promotional strategies of each agency dictate who uses the line. It appears the majority of lines are used primarily by younger adults (from about 18 up to about 35 or 40), although a few provincial lines indicated they did receive calls from adolescents. This is consistent with information provided by the Nurse Educators suggesting the service is used primarily by younger adults.

Other information lines appear to have difficulties promoting awareness and use of their lines with selected groups, although no consistent pattern emerges. Some of the groups seen as not accessing one or more of the lines include: adolescents (under 18), rural residents, street people, IV drug users, parents, elderly, non-English speaking residents and bisexuals. A few also feel they are having difficulty serving the hearing impaired, either because they have no TDD (Telecommunications Device for the Deaf) capability or because the hearing impaired are resistant to telephone service.

Literature

Who accesses a telephone information line depends a great deal on the type of information being offered by the service:

- The United States National Cancer Institute's Cancer Information Service (CIS) has approximately 30 regional offices across the U.S. to provide cancer information to local residents. Residents of states not served by a regional office call a national toll-free

number. Callers to CIS are primarily white, female and have a high school diploma or more. The age group that calls CIS most frequently is the 30-39 group.

- Users of Dial-A-Dietitian (Roanoke, Virginia) tend to be female, over the age of 46, homemakers, with a college level of education.
- Tel-Med (Winston, North Carolina) is a nationally franchised health information system operating in over 100 communities in the U.S. Tel-Med provides specific taped information to callers upon request. Tel-Med callers tend to be younger, educated, white collar workers, in good health, and aware of a need for health information.
- CAN-DIAL (Buffalo, New York), a state operated cancer and AIDS information service found that females by far out numbered males in requests for tapes containing cancer related information, while males accounted for over half of the callers for AIDS related tapes. Most of the callers seeking AIDS information were under the age of 40. This may be a reflection that younger people are more likely to be sexually active and to perceive themselves to be at risk, or that they are more willing to use telephone information services.
- An evaluation of the British Columbia AIDS Information Line (Vancouver) revealed that the proportion of male and female callers was approximately equal (except for Vancouver callers where males comprised 57% of the callers). Age distributions for local and long-distance callers were similar, with those age 20-29 years comprising more than one third of both local and long distance calls. This age group was followed by 30-39, 40-49 and the over 50 group in that order. The major difference between local and long distance callers was the greater response among people 19 and under from outside Vancouver. It was apparent from the nature of their questions that many long distance callers in this age group had recently been exposed to an AIDS education program. Programs offered in schools may have increased calls from young people for clarification on concerns not readily discussed in a classroom setting.

In general, callers to U.S. information lines described in the literature appear to be predominately female, white, age 20-49 with at least a high school diploma.

The literature indicates that callers to AIDS information lines in general include the worried well, HIV positive persons, persons living with AIDS, physicians needing information for patients, concerned citizens, and symptomatic people in pain and despair. Increasing attention has been directed toward the worried-well and the significant demand that this group places upon limited health care resources. More and more, the telephone is being used to facilitate access to health information for an information hungry public. Some of the early literature in this area suggests that low-risk individuals made up the largest group of callers to AIDS information lines. A gross lack of information and an excessive, almost phobic, fear were not infrequent in this section of the general population.

More recent literature, however, indicates that the majority of callers to AIDS information lines are people who feel they may have put themselves at risk of exposure to HIV. Response to the British Columbia AIDS Information Line was greatest among the groups most likely to be at risk and concerned about contracting the AIDS virus: those age 20-29 years, males and persons living in the metropolitan Vancouver area. The majority of persons in this age group were sexually active, and many were concerned with the possibility of having already contracted the AIDS virus.

There is limited information available regarding the people who do not access telephone information services. An evaluation of Tel-Med users indicated a great gap in awareness of the service between socioeconomic strata. The poor and less educated were less aware of Tel-Med. Among respondents who had heard of Tel-Med, however, education and income were not significantly related to use. That is, once they knew about it, the poor and less well-educated used Tel-Med just as much as their better educated and higher-income counterparts.

It was stated by authors of the Cancer Information Service study that obtaining or conveying health information over the phone is not a common practice among many disadvantaged groups. The basis for this statement was unclear from the literature and there were no hypotheses given to explain this phenomenon. Supporting this assertion, however, a 1990 national survey conducted by the Gallup Organization in the United States showed that use of telephone information services is lowest in households in both the lowest and highest income range categories.

I.V. drug users make up only a small proportion of callers to AIDS information lines. They appeared to be much less interested in getting information than members of other high risk groups such as homosexuals, bisexuals or partners of people at risk. I.V. drug users who did access an AIDS information line were also less likely to request information regarding preventive measures.

WHY DO PEOPLE CALL THE INFORMATION LINE?

Summary

Users, whether accessing recorded information or calling the Nurse Educators, appear to be calling the Information Line for similar reasons. Typically, they call because they have an urgent or immediate need for information or assistance. Many are fearful because of some sign or symptom, or anxious about a past behaviour that has been brought to their attention through the media or health education. These individuals are looking for an appraisal of their risk and reassurance or advice on what they should do, and many are interested in a referral to another service. Other users call for information, typically because they have heard or been told something and want additional information or clarification. Calls are also received from teachers, students and others who require information for projects or assignments.

Many people who use the line have other alternatives to get the information or assistance they were looking for, except in smaller communities where users were more likely to say they did not have a service in their area. Users from larger communities appear to prefer the convenience of the service, whereas those from smaller communities have nowhere else to go, or prefer the anonymity of the service. Many clearly choose the line because it is their preferred source, citing anonymity, convenience and credibility as the reasons for using the line. It is felt these reasons apply equally to those who use the line just for information, and those who are "in crisis" and need reassurance and advice.

Service Users

When users were asked why they called the line, the reasons given included:

- looking for information (56% overall)
  - 84% of those who completed post-secondary education
  - 75% of those from a small city
  - 71% of those > age 30
  - 70% of females
- thought I may have put myself at risk (33% overall)
  - 52% of males
  - 50% of those from Edmonton
  - 49% of those aged 21 - 30
  - 47% of those with some post-secondary education
- needed information for a project/presentation (9% overall)

It appears that males and younger adults are more likely to call because they are concerned they have put themselves at risk, while females and older adults are more likely to call for information[15]. Interestingly, users of the Nurse Educator service were less likely than users of the

[15] Some of these callers may also have been concerned they had put themselves at risk, although they did not suggest this to the researcher.

recorded information system to indicate they called because they thought they may have put themselves at risk (15% vs 37%), and more likely to indicate they called for information (75% vs 52%).

When asked why they phoned the toll-free line rather than using a service in their own area or community, the most frequent responses included[16]:

- liked the convenience of calling rather than going out (29% overall)
  - 50% of those from Calgary
  - 44% of those from a city (small and large)
  - 36% of those aged 21-30
- no place to get information in my area (24% overall)
  - 41% of those from north of Edmonton
  - 40% of those from a rural community
  - 36% of those < age 21; with < grade 12
  - 33% of those from south of Calgary, some post-secondary
- didn't know where else to call or go (14% overall)
  - 28% of those from high school diploma
  - 25% of those from Edmonton
- preferred to get information anonymously (14% overall)
  - 21% of those with some post-secondary education
  - 20% of those from a rural community; from central Alberta
  - 18% of females

Users from cities appear to prefer the convenience of the service, whereas those from other communities have nowhere else to go or like the anonymity of the service. No significant differences in reasons for calling were found between users of the recorded information system and users of the Nurse Educator service.

For the majority of users (83%), it was the first time they had used the service. A few (6%) had used it twice, and 11% had used it three or more times.

The researcher received a number of after-hours calls from individuals who were clearly upset or frightened and needed immediate reassurance and advice that the researcher was unable to provide. The AIDS/STD Information Line is being relied upon, therefore, as a "crisis line" for some who have no other immediate source available to turn to for help.

Nurse Educators

Nurse Educators believe that most of the people who call them have alternative information sources, but the Information Line is their preferred choice. They believe anonymity to be the

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[16] Further breakdowns are provided for this and other responses where demographic differences are felt to be of interest. Readers should be again cautioned that the sample is small and results are not necessarily representative of the user population by category or in total.

major reason callers use the line, particularly those in rural communities where it was felt to be more difficult for people to maintain anonymity with local service providers. The Nurse Educators also feel the Information Line is a highly credible source with callers, and offers an extremely convenient way to get information without having to make an appointment to see someone locally. Many callers indicate to the Nurse Educators that they have already seen their doctor and are calling because they are confused or worried about what the doctor told them.

The Nurse Educators felt that most users call them because they are concerned or anxious - they need help with an immediate "problem". Many have a sign or symptom that concerns them, or have engaged in a risky behaviour at some point in the past that has made them anxious they may have contracted an STD. Some also call to get clarification or confirmation of information they have received from somewhere else (e.g., a doctor). The Nurse Educators also get calls from teachers and other health providers who have not put themselves at risk but are using the line as a professional information resource related to their work.

Most call the Nurse Educators only once, although a few call back for ongoing support or reassurance.

Other Information Lines in Canada

Anonymity and confidentiality were the key reasons given for callers using the information lines. Only one line mentioned there were no other sources of information, suggesting that people do have options but may prefer to call an anonymous line. Convenience and credibility were also mentioned as reasons callers use the lines.

Most lines get repeat callers (estimated as high as 30% for one line). Repeat callers are usually looking for continued reassurance (some are the "worried well") or clarification of new information in the media. Natives were also mentioned as repeat users, needing ongoing support as they progressively implement behaviour changes.

Literature

The general public has a thirst for information that will help them understand AIDS and how it can (and cannot) be transmitted. Others look for appropriate referrals to services that help them cope with the threat of HIV infection and AIDS. Still other calls involve people who are fearful that they have been infected with HIV, or those living with the disease who are looking for consolation and reassurance.

While the primary goal of the Cancer Information Service (CIS) is to provide information, it is apparently utilized by people for more than just information. For example, many (56%) called for assurance that their symptoms were not serious or for someone to talk to (34%), suggesting that the CIS also serves a social support function. A third of the respondents reported not knowing who else to contact for information, while 21% called specifically for referral to a physician.

Callers to an anonymous mental health/counselling line in the U.S. indicated that they called when they did because (in order of frequency):

(1) the problem had gotten worse,
(2) the problem had just occurred,
(3) they were prompted to call after seeing a television advertisement,
(4) a friend suggested they call.

Callers expected someone to:

(1) listen to them,
(2) give them advice or suggestions,
(3) refer them to another helping agency,
(4) provide them with information.

By comparison, respondents reported that they received:

(1) supportive listening,
(2) referral to another source,
(3) advice or suggestions,
(4) information.

Thus respondents were somewhat more likely to receive a referral than they had initially expected and were less likely to be given advice and suggestions than they had expected.

Most individuals who call telephone counselling services do so only once or twice, and many have sought help elsewhere. The CAN-DIAL study found that first-time callers for AIDS-related tapes remained fairly constant over a five year period, accounting for approximately 80% of all calls, indicating that the service continued to penetrate into new markets. First-time callers for cancer-related tapes, however decreased to a level of about 50%, indicating that it continued to appeal as an resource to previous callers interested in cancer information.

WHAT INFORMATION ARE (OR WOULD) PEOPLE CALLING THE LINE FOR?

While information about transmission is still requested, callers are increasingly seeking advice on more personal issues such as safer sex and negotiating with partners. Many callers also want information about signs and symptoms and an appraisal of their personal risk, along with reassurance and advice about what they should do. These calls often lead to discussions about testing and referrals to appropriate medical services.

Most non-users feel they know everything they need to about AIDS/STD. A small percentage expressed an interest in information, all of which the service currently provides, indicating the range of topics covered by the service is appropriate for the needs of most Albertans.

The availability of written information sent in response to callers' requests is seen to be an important component of the service offered by some other information lines.

Service Users

Users called for information on a wide range of topics. The topics most frequently sought by users included[17]:

- risks of becoming infected (19%)
- HIV testing (8%)
- AIDS symptoms (8%)
- STD information (8%)
- STD symptoms (5%)
- AIDS information (4%)

Many callers (23%) were also requesting information about specific STD (e.g., Chlamydia, Herpes, Warts, Hepatitis, Crabs, Scabies). Other topics included:

- protection from infection on the job (clients, bathrooms)
- what to do about HIV+ individuals who don't practice safe sex
- reliability of condoms
- clinic locations/hours
- status of health care insurance when infected
- bereavement information
- availability of speakers for presentations
- AIDS statistics
- sexual orientation.

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[17] This question was posed early in the interview. Users were frequently uncomfortable when asked what information they were looking for, and it was difficult in many cases to determine what specifically they were calling about. Many would not even specify whether they were calling about AIDS or STDs. The program already collects good statistics on information topics requested from Nurse Educators and accessed on the recorded information system.

Non-Users

Most non-users (71%) said they were satisfied they knew everything they needed to about AIDS or STD. Interestingly, this result was not found to be related to whether or not the individual reported practicing a risky behaviour in the last 12 months.

Those not satisfied they knew everything (29%) were more likely to be from the following groups:

- some college/university (44%)
- Edmonton (41%)
- rural community (38%)
- central (36%)

When these non-users (i.e. those not satisfied they knew everything) were asked what kind of information they would be interested in, a further 46% said they did not know. The most frequent responses of those who were interested in information included:

- information on cause/transmission of AIDS/STD (23%)
- information on symptoms of AIDS/STD (6%)
- new information (6%)

Those who said they did not know everything and also did not know what information they would be interested in (n = 15) were prompted for their interest in specific topics. The results are as follows:

- information about getting tested (12)
- how to discuss safe sex with your partner (8)
- how AIDS/STD are spread (5)
- behaviours that are risky (3)
- safer ways to have sex (3)

These results suggest that most non-users are not actively seeking information or assistance. Information they would be interested in, however, is readily available from the Information Line.

Nurse Educators

Callers are less interested in basic facts about modes of transmission than when the service first started. Some Nurse Educators suggested that callers may be more knowledgeable now about basic facts, and/or may be getting some of this information from the recorded messages before calling the Nurse Educator. Calls are becoming longer (verifiable from call statistics) and more personal, and people are frequently seeking advice on what they should do. Information on safer sex and negotiating with partners has become more common. The Nurse Educators are not getting a significant number of simple questions and prank or obscene calls, although they frequently are asked for specific directions to the clinic, information which some felt could be provided on the recorded system.

Other Information Lines in Canada

Users of other information lines are mainly looking for information and advice when they call the lines. Callers also frequently ask about signs and symptoms and want an appraisal of their risk as well as reassurance. Many also use the lines as a source of referral, including information about testing and where they can go for testing. Users of lines in other jurisdictions appear to call for the same kinds of information as users in Alberta.

Literature

As the public's knowledge of HIV and AIDS has increased, the type and scope of questions have changed. In contrast to general questions received during the late 1980's such as "What is AIDS?" and "How do I get it?", callers now ask more specific questions. For example, they now have questions regarding the incubation period of HIV, types of testing procedures used to identify HIV antibodies, reliability of testing procedures, statistical information regarding methods of transmission, and the difference between anonymous and confidential testing. Many callers are seeking in-depth information regarding prevention. Some callers need referrals for counselling and support groups and home care help.

Callers' concerns most often included: HIV antibody testing, modes of transmission, signs and symptoms of AIDS, HIV myths, information about other STD and where available, requests for written materials. The availability of written materials may be an important component of AIDS/STD education. When written materials are sent in response to callers' requests, it was felt there was a high probability it would be read and, perhaps more importantly, that it would be retained for re-reading.

Authors suggested the differences in the types of questions asked by males and females and by people of different age groups have two important implications. Firstly, information about AIDS must have a different content for different sections of the population, because different age and gender groups start with different knowledge. Secondly, continuing research must be done to map out these differences between groups and to monitor the way in which knowledge changes over time.

WHAT APPROACH TO INFORMATION DELIVERY DO PEOPLE PREFER?

Summary

There is a high level of support for an anonymous information line to provide the general public with information on AIDS and STD, and the vast majority trust Alberta Health to provide good information on these topics.

While most users expected to talk to a person when they called, and generally appear to prefer this option, it is clear that many see recorded information as a valuable option and a good way to get answers to their questions. Indeed, some appear to prefer this option. Nonetheless, it is clear that many would prefer to talk to a person, and some see it as the only way to get personalized answers to their questions. The results support the importance of providing both alternatives to callers, allowing them the option to choose the alternative that best fits their situation. This runs contrary to the strategy of other provincial lines contacted which did not typically provide recorded information. Services that did provide recorded information, however, appeared to provide information on topics beyond AIDS and STD.

The other provincial information lines contacted tend to use some combination of paid staff and trained volunteers to respond to calls. The use of trained nurses to answer calls is not prevalent. While the majority of users of the AIDS/STD Information Line were comfortable talking to the Nurse Educators, most indicated they would have been satisfied with a volunteer who was well trained on AIDS and STD, but had no formal medical background.

Service Users

Only 35% of users knew the line was a service provided by Alberta Health, although the vast majority (94%) trusted Alberta Health to provide them with good information.

Two-thirds (68%) of users said they did not expect to hear a recorded message when they called the line. Of these, 42% (male 35%, female 48%) said they initially reacted negatively when they found it was a recorded message. Interestingly, however, 38% reacted favourably. Furthermore, 45% of all users suggested they liked the option of using a recorded information system first.

The majority of users (80%) felt that recorded messages were a good way to provide the kind of information they were looking for. Only 6% said they hung up specifically because they don't like recorded information systems. They were more likely to hang up because they decided to call the Nurse Educator (33%), because they didn't have a touch-tone phone (18%) or they had some sort of trouble[18] with the system (15%).

[18] Some callers with cheaper "push-button" phones falsely believe they have a "touch-tone" phone when in fact the phone emits pulses rather than tones when the buttons are depressed. These phones cannot properly activate the recorded message system, possibly leading to the frustration experienced by some callers.

Still, it is clear that many prefer talking to a person:

- Of those who reacted negatively to hearing recorded information, the majority (74%) said they would have preferred talking to a person.
- For those who felt recorded messages were not a good way to provide the information they were looking for, the most common reason given (70%) was needing to talk to a person to get an answer to a specific question.
- If given the choice, 54% of users of the recorded information system would have preferred talking to a person. Comments indicate that these individuals have greater confidence in getting direct and more detailed answers to their specific questions from a person. Other comments indicate that some needed to explain their situation and would have preferred the personal contact. Specific comments included:
  - needed more detail (11)
  - couldn't find what I wanted/not much information on recorded system (10)
  - faster and more to the point talking to a person (7)
  - can express your situation better (3)
  - more personal (3)
  - can ask specific questions (2)
  - more confidence in a person (1)
  - had difficult questions to ask (1)

Over half (60%) of the users of the Nurse Educator service who called the researcher indicated they did so because needed more detailed information, could not find what they needed or had problems using the recorded system, while 20% indicated a desire for personal contact to discuss their situation. Another 15% said they did not have a touch-tone phone.

All of those who had reached the Nurse Educator were satisfied with the service they received. No negative comments were received. Only six users provided suggestions for improvement, including:

- provide service in the evening
- more publications for mailing-out
- more training in area of sexuality
- provide TDD service
- provide questions I could ask the dentist
- more information on Hepatitis B.

No consistent patterns of weakness are evident from these remarks.

All who had reached a Nurse Educator indicated they were comfortable talking with the Nurse Educator, and only 15% indicated they would have preferred someone else (e.g., gay male, counsellor, physician). Interestingly, 70% of those who used the Nurse Educator service indicated they would have been satisfied with a volunteer who was well trained on AIDS and

STD, but had no medical background. Thirty percent (30%) were uncomfortable with a volunteer without a medical background.

Non-Users

The vast majority (95%) felt there was a need for an anonymous toll-free line for the general public to get information on AIDS and STD, and 98% of these said they trusted Alberta Health to provide good information on these topics.

When asked where they would go to get information or advice on AIDS or STD, the most frequent responses included:

- doctor (55%)
- health unit/nurse (28%)
- school (6%)

The toll-free number was the least frequently mentioned source (once out of 120 cases). It is clear that traditional sources of health information come to mind more readily for many people; however, the majority (93%) said they would feel comfortable phoning an anonymous toll-free number to get information on AIDS or STD. Comments again indicate most of those who would not feel comfortable phoning an anonymous toll-free number would prefer to talk a person:

- rather talk to someone I know (3)
- rather talk face-to-face with someone (2)
- rather talk to a doctor (1)
- rather talk to a real person (1)

When asked how they would feel if they called a toll-free number and were asked to choose from a selection of recorded messages, 33% said they would react negatively, 28% would react positively, and 39% would have no reaction. Most (72%) felt they would be able to get good information this way, particularly younger individuals (84% under age 21).

When asked how they would feel if they called and a person answered, 12% said they would react negatively, 67% would react positively, and 22% would have no reaction. Most appear to prefer talking to a person. Interestingly, however, 67% of non-users also said they would like the option of listening to recorded messages first. Only 28% said they would rather talk to a person right away. Most of these (56%) felt they would not be able to get good information from a recorded information system, indicating that some have a strong preference for talking to a person over listening to recorded information.

These results suggest that both methods of providing information are supported by significant numbers of people, so long as either option is available.

Nurse Educators

Nurse Educators felt the recorded system can't provide the human/caring touch that many people (particularly those in crisis) want and need. They felt the recorded system cannot easily personalize the information or advice provided, and can't help the individual work out strategies.

Nurse Educators feel they are credible with the majority of callers, and few callers complain about the service or indicate a preference for another type of resource. Nurse Educators do not support the use of "trained volunteers" or paid staff with no formal medical training, feeling this might compromise the quality and credibility of the service. Medical training was felt to be particularly important because callers often seek advice relating to signs or symptoms that non-medical personnel were not considered qualified to handle.

Other Information Lines in Canada

All seven provincial information lines contacted use information specialists to answer telephone calls. Only one, however, also provided recorded information (British Columbia). In addition to British Columbia, two other recorded information systems were included in the review (Edmonton Healthline, Edmonton Power 92 Radio)

The recorded information system in British Columbia and the Healthline in Edmonton provide very extensive information on a variety of topics beyond AIDS and STD. The most sophisticated system is operated by the Edmonton Power 92 Radio. In addition to AIDS information, it also provides regularly updated information on weather and sports. Callers can do a brief "AIDS Quiz" for which they are scored on-line by the computer and given the correct answer and a brief explanation. They can then access specific topics where information is provided in explicit "street-oriented" terminology. Furthermore, AIDS information is customized for the caller's gender. Callers can opt to talk to a real person, and are branched directly to the AIDS Network of Edmonton at the press of a button.

Nurses are used as information specialists in only two of the seven provincial services contacted (Yukon, B.C.). The others make use of a combination of paid staff and trained volunteers. Volunteers in many cases provide front-line service, although they are typically backed up by paid staff for more technical/specific information or counselling. It does not appear that Quality Assurance measures are widespread, although three locations occasionally monitor calls taken by staff.

Literature

There are two basic types of information lines: those with recorded information, and those with an interactive service provided by educators who respond directly to each caller's inquiries. Recorded information is useful for callers who want generic information or who have difficulty asking specific questions. Direct access services are operated by health professionals or trained

volunteers and provide the opportunity for callers to ask specific questions and receive personalized information from a knowledgeable source. A combination of the two types of services increases the system's ability to meet the public's need for information.

An experiment with an automatic telephone answering service in Rotterdam, The Netherlands was started in September of 1976. The service provided recorded information dealing with STD. The results were evaluated for the first three months that the service was in operation. It was concluded that the technical information given on the tape was sufficient for most callers. Thus there was little perceived need for more personal discussion of the topic. Only a very few people with "personal problems in connection with STD" phoned an available nurse. It was felt that all other callers were sufficiently informed by the information given on the tape or could go to the outpatient clinic or other facilities for treatment.

The Rotterdam study concluded that the division of tasks between the anonymous tape, which gave only technical information, and the more personal approach through the nurse, who could deal with the emotional aspects, was effective. It was assumed by the authors of the study that the method of giving health education by an automatic telephone answering service is effective only when the recorded information includes specific addresses for consultation and treatment (e.g., general practitioner, specialist or free clinic) that are within community distance for the client. Therefore, implementation of a recorded information service in a region or large city would be more appropriate than having a single national (or provincial) number for STD information that could not give addresses for local treatment facilities to each caller.

The survey findings from the Tel-Med recorded information system suggest that recorded information delivery services may be a valuable and inexpensive means of improving access to health information and that the information provided by recorded messages can influence consumer health decisions.

In contrast to these findings, the touching and memorable nature of calls to the National AIDS Hotline (Centre for Disease Control, Atlanta, Georgia), as well as the volume of calls, suggests that many people have a need to reach out for more than just facts. Authors of this study emphasized the importance of having a live educator deliver AIDS information within a context of concern, sensitivity, confidentiality and trust.

The National AIDS Hotline (NAH) originally operated with volunteer staff to answer telephones; however, to maintain consistent information delivery, they now use only paid staff. Hotline personnel typically receive initial training on the basic facts about AIDS and HIV, how to respond to callers' concerns, how to use a resource referral system and how to complete call report forms. Training content can include listening skills, values clarification and crisis intervention. Staff (paid and unpaid) are generally screened and selected for their individual ability to be objective, empathetic, non judgmental and sensitive.

The NAH has developed a comprehensive training program for their personnel. Each educator must successfully complete a 45-hour training program before being assigned to answer calls from

the public. Examinations are given that determine the trainees' content knowledge for each training module. A comprehensive examination on AIDS information, technical systems and communications skills is given at the completion of the course. Supervisory personnel orient new information specialists to their work responsibilities. Trainees listen to supervisors answer calls, then discuss issues raised and responses given. Language modeling of callers is stressed in order that information will be understood by the caller.

Call monitoring equipment now allows supervisors to hear both parties in a conversation, resulting in a far better ability to judge the performance of the educator. Calls are monitored by shift supervisors. At a minimum, call evaluation assessments address accuracy and consistency of information, courtesy, avoidance of medical and value judgments, clarity of information presented, appropriateness of referrals and appropriateness of the educator's language level and style.

Inservice training of information specialists and supervisory staff comprises a significant component of NAH quality assurance. Inservice presentations are made on a monthly basis, and attendance is mandatory. The content of inservice training sessions is determined by surveys of staff to identify their needs, receipt of new or updated HIV and AIDS information from the government, and identification of topics as a result of call monitoring exercises.

HOW COULD THE RECORDED INFORMATION SYSTEM BE IMPROVED?

Summary

Users appear to be largely satisfied with the recorded information system.

Voice type/quality and language level were not a significant concern. Users were more likely to suggest that the information could have been more specific or detailed. The recorded information system might also be used to provide detailed directions to clinic locations.

A number of users said they encountered difficulties using the system, and suggestions indicate the system could be improved to provide more direct and more reliable access to specific information items.

A review of the information line operated by Edmonton Power 92 Radio station provides insight into how newer technology can be applied to provide dynamic and interesting information tailored to specific sub-sets of the population.

Service Users

About one third (33%) of service users said they hung up without accessing recorded messages. The most frequent reasons given for hanging up included:

- decided to call the nurse (33%)
- didn't have a touch-tone phone (18%)
- system didn't work/had trouble with the system (15%)
- wanted to talk to a person (9%)

Evidently some callers are hanging up because they experience difficulty using the system.

Twenty six percent (26%) of the users gave suggestions when asked how the recorded information could have been improved. Suggestions included:

- provide more detailed/specific information (12)
- deal with legal/ethical issues regarding HIV infected people (3)
- identify counselling or support services available (3)
- list over-the-counter medications for STD treatment (2)
- provide information on Hepatitis B (2)
- provide information on sexuality (1)
- identify where more information can be obtained (1)
- identify places to get tested (1)
- tell where you can't get infection (e.g., toilet seats) (1)

Only 15% of the users gave suggestions about how the recorded information system itself could be improved. Suggestions included:

- allow callers to get nurse on 1-800 line without calling another number (5)
- put menu right up front (3)
- allow callers to make a selection without waiting to end of message (2)
- get right to the point (1)
- general messages should be optional so you can directly access what you want (1)
- increase sound volume (1)
- provide TDD service (1)
- system should respond faster after pressing buttons (1)

Nurse Educators

Nurse Educators get few complaints from callers about the recorded information system. Nurse Educators suggested the messages need to be made more interesting, and the system should allow quicker access to specific topics. Some also felt the system could be used to provide users in Edmonton and Calgary with specific directions to the clinic from various areas of the city (in addition to clinic addresses, which are currently provided).

Other Information Lines in Canada

Only three of the lines contacted provide recorded information, and only one (Edmonton Healthline) knew that callers were hanging up prematurely without accessing detailed messages[19]. The Healthline menu merely provides a listing of topics and their access codes, without significant branching in the menu. It was felt that the menu may be too long for some callers, but they may also be uncomfortable with the technology.

The recorded information system in B.C. has an extensive selection of information items on a wide variety of health topics. They use a similar menu structure to that used by Alberta Health, requiring callers to listen to general messages before being informed of more specific messages at lower menu levels. The menu structure, however, is considerably more complex than Alberta's, with at least one more level before callers can access the most detailed message level. Callers who don't have a touch-tone phone or who don't want to access recorded information are required to listen to a long general message before being connected to a Nurse Educator. (They are not required to call another number as in Alberta).

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[19] There has also been concern within Alberta Health that many callers may be hanging up prematurely. A brief analysis of information line call statistics was done to estimate the average length of telephone calls for those who did not stay on the line to access specific information items at the bottom of the menu structure (approximately 70% of calls received). The average length of these calls was estimated to be 3 minutes (confirmed from two separate monthly activity reports). This would take callers through the initial greeting and most of the general STD or AIDS message, assuming that some hang up after hearing the nurse educator number and do not go on to select the general STD or AIDS message. It is assumed that many of those who select the general message stay on the line to listen to most of the message, although it is not possible to confirm this from the statistics available.

HOW COULD ACCESS TO AND AWARENESS OF THE SERVICE BE IMPROVED?

Summary

Information lines, if they provide specialized services at all, tend mainly to provide service in other languages prevalent in the population being served[20]. Several provide extended hours of service, typically in the evening.

Non-users indicated a preference for evening hours. Although most users of the Nurse Educator service did not find the current hours of operation inconvenient, a few indicated that evening service would be appreciated. A significant number of users do not have a touch-tone phone, although the numbers do not appear to be leading to excessive or inappropriate use of the Nurse Educator service.

There appears to be some level of awareness of the AIDS/STD Information Line among the general public in Alberta, more so among those reporting risky behaviours. There is evidence, however, that many do not know about the service, and find the number directly from the telephone book at the time they are seeking help. Mass media approaches (particularly television) were considered to be the best way to inform the public of the service.

Other information lines find that usage can be dramatically affected by media events and advertising, citing television as a particularly potent media to generate awareness.

Service Users

Only 2% of those who tried to use the recorded system indicated they had trouble understanding the information. It was interesting that 18% of users said they did not have a touch-tone phone.

The majority (95%) of users of the Nurse Educator service indicated that it was convenient to talk to the Nurse Educator when they did. One indicated that evening hours would have been more convenient.

At the time the users of the recorded information system contacted the researcher, only 19% said they had already called the Nurse Educator. Some had not yet tried because they did not think the Nurse Educators would be available after hours. Some who had called the Nurse Educator said they did not get an answer; however, their comments suggest they may not have been aware of the Nurse Educator's hours and called after hours. The majority (90%) of users referred by Nurse Educators said they got through to the nurse right away. Only 10% said they got a busy signal.

Many users (59%) learned about the service from the telephone book. A further 14 % learned from a friend. Only 8% learned from a pamphlet, and still fewer had learned from school (6%) or

[20] The survey did not pursue demand for specialized services in Alberta.

another health service (3%). The vast majority (98%) of users indicated they had no trouble finding the telephone number. While many (43%) felt few of their friends knew of the service, many others (48%) felt some or most of their friends were aware of the service. Awareness was not strongly related to whether or not the individual reported practicing a risky behaviour in the last 12 months.

When asked how awareness of the service could be improved, use of the mass media was mentioned most frequently, including:

- television (42%)
- radio (13%)
- newspapers (8%)

A few also mentioned the phone book (9%) and the schools (6%) as places where the service could be promoted.

Non-Users

The majority said they had access to a touch-tone phone[21] (93%) and could easily find a private spot to make the phone call (98%). When asked what would be the most convenient time to make the call, the following responses were received:

- evening: 5pm - 10pm (51%)
- any time (27%)
- afternoon: 12pm - 5pm (12%)
- morning: 8am - 12pm (8%)
- night: 10pm - 8am (3%)

Afternoon and evening hours appear to be the most desired.

Only 39% of those called by the researcher said they were aware there was a toll-free number they could call for information on AIDS or STD. Awareness was lowest among the following groups:

- south of Calgary (31%)
- ages 21 - 30 (31%)
- central Alberta (33%)
- rural community (33%)
- grade 12 or less (34%)
- males (35%)

Awareness of the Information Line was highest among those who reported practicing a risky behaviour in the last 12 months (46%).

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21 Somewhat fewer users indicated they had a touch-tone phone (about 82%). Possibly non-users feel they could access a touch-tone phone elsewhere even if they did not have one in the house.

When non-users were asked where they learned about the toll-free number, the most frequent responses included:

- school (30%)
- television (26%)
- work (11%)
- newspaper (9%)

When asked where they would look to find the number if they wanted to call right now, the most frequent responses included:

- phone book (63%)
- don't know (20%)
- hospital/health unit (5%)
- operator/directory assistance (5%)

Most (66%) felt that few of the people they knew were aware of the line. Only 13% said most were aware. When asked how awareness of the service could be improved, the most frequent responses included:

- general advertising(27%)
- television (23%)
- don't know (13%)
- newspaper (8%)
- pamphlets/brochures (8%)
- school (7%)

Females were somewhat more likely than males to suggest advertising (35%) and pamphlets/brochures (11%), while males were more likely to suggest television (28%) and schools (11%). Mass media approaches appear to be more strongly favoured than others.

Nurse Educators

Nurse Educators do occasionally sense that callers would prefer to call at another time and place when they can have more privacy. Extending service through the lunch hour and into the early evening were felt to be desirable. Currently, users who call the number advertised on the recorded information system (i.e., "Line 8") get a busy signal when another caller is already on the line with a Nurse Educator. Having back-up for these callers would require installation of a rotary exchange on the line. The rotation is considered to be stressful and tiring on many days, and it was suggested that more staff should be available to take calls, either in regular rotation, in temporary relief or in back-up when Nurse Educators are on the line.

The Nurse Educators believe that, while some find out about the service and get the number from school or another health service (doctor, clinic), many users get the number directly from the telephone book at the time they are actually seeking service. They felt that few people are aware of the service, but can generally find it when the need arises.

Other Information Lines in Canada

All of the provincial lines contacted provide toll-free telephone access to residents across the province. Information specialists are not available on a 24 hour basis. Hours of operation vary considerably, but service is frequently available in the evenings. In Ontario, service is available in the evenings and also on weekends. In Newfoundland, after-hours calls are forwarded to an on-call worker or to a message service.

Lines that provide recorded information do so on a 24 hour basis. All services are limited to callers with touch-tone phones.

Ontario provides dedicated services in French on a separate line. Manitoba provides service in French, although hours are limited. Some of the other information lines provide service in other languages besides French (e.g., Italian, Portuguese, Spanish, German, etc.) depending on the availability of ethnic staff. In Ontario, these services are provided on the English line at specific times on specific days. One line has a special counsellor for female callers. Two lines have arranged a referral service for Native callers. Very little is currently being done to provide service to the hearing impaired.

Promotional strategies vary considerably. Other lines typically list their numbers in the telephone directory, and most also use posters and/or pamphlets promoting the service and the telephone number. Only three advertise their service in mass media such as TV, radio and newspapers. Other media used include newsletters, billboards, stickers, public service announcements and condom packages.

Literature

Information line services can be targeted to reach different populations. For example, the National AIDS Hotline in the United States serves the general public, the Spanish speaking population, and the deaf population. Information specialists for the Spanish-speaking service, in addition to being bilingual, must possess knowledge of the differences among Hispanic cultures. The deaf service requires that employees be either deaf or from families with deaf members and be thoroughly competent in American Sign Language, since the structure of this language influences written communication with the deaf. There continues to be a number of AIDS information lines in the United States that are targeted specifically toward homosexuals and bisexuals.

Initially the NAH did not offer 24-hour educator services, creating an access barrier for those unable to call during normal work hours. By providing Spanish-language and TTY services, additional access barriers have been overcome.

The Si'Dayuda AIDS information line (Movimiento Homosexual de Lima, Peru) decided against reprinting its original promotional brochure when data indicated that its impact was negligible. Surges in the number of calls to this information line reflected media events, including: mass

media campaigns; ads broadcast by the program; media appearances by information line staff; and other media coverage of AIDS. The majority of callers cited television as the most important medium for information. This was followed by newspapers or magazines and radio.

The claim that brochures are an ineffective method of advertising information lines was supported by data collected at an anonymous information line in the United States. Callers to this line reported that they learned about the service from three primary sources: television advertisements, the telephone book and from a friend. Sources mentioned by very few of the callers included: referral by a professional, radio and newspaper ads and a widely distributed brochure.

Contradicting the evidence that brochures are an ineffective means of advertising information lines, the Dial-A-Dietitian service claimed to have improved community awareness of their service through the distribution of brochures. However, they also utilized billboard advertisements, and a weekly newspaper column during their advertising campaign and were not able to identify the impact of any single method. Physicians were also cited by this service as a good source of referral.

AIDS callers were more apt to report finding out about CAN-DIAL through the newspaper, television and radio promotions, while callers for cancer-related information most often cited brochures and ads placed in the telephone directory.

Caller response to the British Columbia AIDS Information Line was clearly affected by initial promotional activities and media events. Pamphlets mailed to each household stimulated more than half of the calls to the line. Increases in caller frequency were also noted immediately following government-sponsored TV and radio spots advertising the line and following media coverage of the International Conference on AIDS. However, the effects of advertising and media events were of relatively short duration. Authors of this report suggest that it is necessary for continued or periodic advertising or media events in order to maintain the visibility of the service to the public. It was also suggested that AIDS education provided by an information line can be targeted at specific populations through advertising. A program was aired each evening aimed at the under 20 age group. The number of calls from this age group increased considerably after these transmissions.

"America Responds to AIDS" (ARTA) contributes significantly to the promotion of National AIDS Hotline services in the United States. Print and audiovisual materials provided by ARTA identify the NAH telephone numbers and services to the public. In addition to ARTA, public and private organizations promote NAH to their constituents. Major mass media resources present public service announcements about the NAH. Examples of promotional efforts have been the "AIDS Quarterly," presented by the Public Broadcasting System, and numerous HIV and AIDS public service announcements produced and presented by CBS and NBC television. Publications such as Parents and Parade magazines have published the NAH telephone numbers, as have a number of school health textbooks. The numbers have been publicized by television personality Geraldo Rivera and were included on package inserts with music recordings by Madonna and

other recording artists. The NAH actively promotes its services to the public. Other approaches used include participation in HIV and AIDS workshops and exhibits at conferences and health fairs.

A 1987 study showed that a "Grim Reaper" media campaign (television and newspapers) sponsored by the Sydney Hospital (Sydney, Australia) resulted in increases in extremely low-risk persons (especially women) seeking HIV antibody testing. The general level of anxiety about the disease appeared to have increased in persons who telephoned the information line during the advertising campaign. The campaign did not influence these telephone callers to find out more information about preventing the transmission of the disease. Rather, the campaign encouraged a significant increase in the number of inquiries that were related to testing for past infection with HIV. The campaign seemed to reach persons of a mean age of 32 years rather than younger persons who are most at risk of HIV infection .

A Gallup survey in the United States found that households used nurse-staffed general health information lines more than any other telephone service, including toll-free help lines for specific problems, mental health help lines, and government agency information lines. This suggests that health lines targeting narrower groups on information topics such as AIDS or STD may be overlooked by the wider public who seek other health information but may access AIDS/STD information if it was also available on the general health information line.

IS INFORMATION BEING RECEIVED?

Summary

Most callers to the Information Line stayed on the line and attempted to access recorded messages. Most also reported not finding what they were looking for, particularly those who accessed AIDS information, and even those who accessed detailed messages. A substantial number said the system didn't work properly or they had difficulty using the system.

Service Users

Most (67% overall) users said they stayed on the line and attempted to access recorded messages (by pressing buttons). Those most likely to attempt to use the line included:

- rural community (84%)
- Calgary (80%)
- < grade 12 (74%)
- < age 31 (73%)

It appears that users from outside Edmonton are more likely to attempt to stay on the line and use the recorded information system. This may reflect the requirement of users outside of Edmonton to use the RITE line or make a collect call to access the Nurse Educators, a more cumbersome procedure than in Edmonton where a simple local call can be made.

For those who stayed on the line, 40% accessed only AIDS messages, 40% accessed only STD messages, and 19% accessed both types. Most (71%) who stayed on the line accessed both the general message as well as a number of more detailed messages, with 39% accessing one, 26% accessing two, 21% accessing three and 15% accessing 4 or more detailed messages. Only 2% said they had trouble understanding the information being given.

Two-thirds (66%) of those who stayed on the line said they did not find what they were looking for. Those more likely to indicate they did not find what they were looking for included:

- > age 40 (100%)
- small city (88%)
- south of Calgary (80%)
- some college/university (80%)
- Calgary (75%)

Interestingly, 70% of those who said they accessed only AIDS information said they did not find what they were looking for, compared to 52% of those who accessed only STD information. It is also interesting that those who accessed detailed messages were less likely than those who accessed only the general message to say they found what they were looking for (36% vs 56%). When asked why they did not find what they were looking for, many (58%) merely stated that the information wasn't helpful or was not what they were looking for. However, a substantial number of others (38%) indicated that the system didn't seem to work properly, or they had difficulty using the system.

WHAT HAS BEEN THE IMPACT OF INFORMATION RECEIVED?

Summary

Users of the Nurse Educator service were satisfied, and callers of the recorded information system generally found the information helpful, even those who said they did not find what they were looking for. Users of the service are reassured, better informed, and better able to make decisions. Some intend to seek service or further information, while others intend to make a behaviour change or pass information on to others. Few said they would do nothing as a result of the information they received.

Studies in other jurisdictions indicate a high level of compliance by callers to recommendations made by telephone help line counsellors.

Service Users

Of those who stayed on the line and tried to use it to get the information they were looking for, 85% said the information was helpful (despite the fact that 66% said they did not find what they were looking for). For those who found the information helpful, the comments suggest the information made them generally more knowledgeable or aware. A few comments also indicate that some users felt reassured, while the information helped others to make decisions about what they had to do next:

- answered my question (59%)
- informed me what needed to be done next (12%)
- reassured me (10%)
- know how to protect myself (9%)

When asked what they would do (or did do) as a result of the information, the most frequent actions included:

- seek service (33%)
- seek information (28%)
- make a behaviour change (16%)
- pass information on to others (7%)
- nothing (7%)

Nurse Educators

Nurse Educators say they do not "counsel" callers in the technical sense of the word, although some aspects of counselling therapy are involved (e.g., supportive listening, reality checking). Nurse Educators are not judgmental and see their role mainly to provide accurate information (in the form of facts and behavioural options) to support an informed decision by the caller. They attempt to maintain a professional and objective relationship with callers, and do not have difficulty maintaining this relationship with the majority of callers.

Nurse Educators are confident they assist most callers, who sometimes call back to thank them for their help. The Nurse Educators normally close by checking if the information has been helpful and if the caller has any other questions. Callers are also encouraged to call back if they need to.

As a result of the service, Nurse Educators feel that callers are better informed, less confused and less anxious about their situation. They feel many callers are more in control and better able to make decisions after talking to the Nurse Educator. They also see that callers are following through on referrals to the clinic because many clinic clients say they were told by the Nurse Educator to come.

Other Information Lines in Canada

The information lines clearly view their primary role as providing information to support decision-making, and a few see this as their only role. Interestingly, however, several indicated they actively promote behaviour change, and a few even provide "proactive" counselling (including pre/post-test counselling). Referral is also frequently mentioned, suggesting these lines attempt to connect callers to follow-up resources and services where necessary. Without looking in more detail at each of the services, it is difficult to determine how strong an advocacy and counselling role is being played, although it would appear several see their role as going beyond the "neutral" provision of information.

The information lines contacted have not conducted formal evaluations or surveys of callers. Success appears to be defined mainly by usage volumes. Effects or impacts attributed to the lines include:

- reduced anxiety
- increased numbers of individuals being tested
- callers seeking additional information

Literature

There is limited research on the effects of telephone information services. As a result, it is unclear what effects can be realistically attributed to these services. With some exceptions, most of the existing research on health telephone services has focused on tracking the demographic characteristics of callers and not on assessing post-call behavior. Moreover, existing research on telephone information programs has not incorporated the theoretical and empirical findings on health behavior from related areas.

Half of those who used the Cancer Information Service said they would have contacted a health professional if the service had not been available, and 4% would have sought information elsewhere. Both of these actions would be considered appropriate by health care professionals. More important, however, are people who indicated that they would not have taken an appropriate action. Respondents in this latter category said they would have done nothing (14%),

they did not know what they would do (11%), or they would worry or get upset (9%). Authors of the CIS study suggest that the best predictor of post-call health professional contact is when the caller asks specifically for a referral. This notion is further supported by research on suicide prevention programs which indicates that the best predictor of subsequent clinic attendance is the degree to which the caller initiates a request for a referral.

The effects of telephone information services likely extend beyond those people who contact the line directly, as many respondents have reported sharing the information they obtained with other people. It is likely that the effects of telephone information services and other health programs are magnified when the information they provide is shared and discussed among people.

Generating Action

Approximately two-thirds of callers who are followed up indicate they are satisfied or very satisfied with the information or support provided, though inaccurate or inappropriate information may in fact be given in a small percentage of cases. When counsellors recommend a specific course of action or make a referral, the overall level of compliance reported by re-contacted callers is around 50 percent, with variation in compliance depending on the action recommended. These findings indicate that for most callers, telephone counselling services fulfill a useful role in providing information on health care and health services and in facilitating access to care for those needing further intervention.

Approximately 75% of undiagnosed and symptomatic people reported contacting a health professional after their call to the Cancer Information Service. The study also reported social factors to be related to health professional contact. This parallels findings from other studies in which support from health professionals and friends was found to be related to the practice of health-related behavior. The motivation of callers might also be an important reason why recommendations were highly adhered to, that is, people were motivated enough initially to call the CIS. It is also possible that information provided over the phone is more acceptable to people who are uncomfortable with health professionals and the medical environment in which these professionals typically work. In addition, the familiarity, comfort, and non threatening nature of the setting in which the information is obtained by callers (usually the home) may positively influence callers' understanding and acceptance of health information. Along these lines, respondents to the CIS study reported feeling much better after their call compared to how they felt before their call.

Behavior Modification

In recent years there has been considerable debate over the long-term effectiveness of interventions designed primarily to alter individual behavior. Some of the literature suggests attitudes and behaviors can be changed by providing factual, consistent and understandable information about HIV and AIDS by persons and organizations in whom the recipient has confidence. It is generally accepted that simply providing information does not necessarily result in improved health practices, but it is an important step in prompting behavior change.

From a public health point of view, information lines have the potential to cause a large effect because of the sheer volume of contacts with people that is made possible. Interactive information lines have other advantages that should result in positive effects as well. Counsellors are able to follow-up their personalized interaction with a reinforcement message. People are more likely to change their behaviors and maintain changes if they have taken an active part in planning their behavioral goals, and a good help line counsellor can facilitate inclusion of each client in planning his or her own unique course of action (assuming the health line takes a counselling approach).

WHAT ARE THE CURRENT AND FUTURE SOFTWARE AND HARDWARE REQUIREMENTS TO OPERATE THE INFORMATION LINE?

Summary

While the current system is meeting the basic requirements for delivering information, it is difficult to use, cumbersome to change messages and not operationally reliable. Correction of these deficiencies is desired, along with increased capacity, improved statistical collection and reporting capabilities, and the ability to economically handle a greater number of lines in the future on a single computer.

CURRENT SYSTEM

The current Information Line System (ILS) uses two IBM-compatible PC/AT microcomputers, each equipped with a ToneTalker telephone interface board, 40 million bytes of hard disk, DOS 3.3 operating system software, ToneTalker support software, and statistics software (custom written by Alberta Health with dBASE/Clipper). The systems are connected to two toll-free telephone circuits (1-800 numbers) which operate on a two-line rotary.

The ToneTalker software and hardware supports:

- recording, digitizing, and storing of individual voice messages on hard disk, or replacement of an existing message with another message;
- establishing hierarchical relationships among messages (menu structure);
- responding to incoming calls by answering the call, responding to touch-tone selections, choosing messages according to the touch-tone selections, vocalizing messages, and disconnecting the line upon call completion;
- recording telephone call events (answering, message selection, duration of call, etc.).

The custom statistics software supports:

- collation of events statistics recorded by each ILS machine; and
- preparation of summary statistics for reporting.

Alberta Health uses the services of a third party to record voice messages on tape. If a sound studio is not available, the message recording is conducted in a "quiet room" within the offices of Alberta Health. Taped messages are then "re-recorded" into the ILS over the air (speaker to microphone).

Statistical data are collected monthly from each system, then consolidated on another microcomputer. Summary statistical reports are produced using LOTUS 1-2-3.

STRENGTHS AND WEAKNESSES

The current ILS meets most of Alberta Health's basic requirements, that is:

- delivery of vocalized information on AIDS and STD to the Alberta public through an anonymous system; and
- producing statistics on the use of the system.

This system has been in operation for five years; the first system was installed in November, 1988; the second system was added in February, 1989; and the statistical software was developed and installed in June, 1989. The systems have operated without major fault since installation.

The current system has a number of shortcomings which detract from efficient operations and support:

1. Entering and Editing Voice Messages
   - Technical expertise is required from Alberta Health, Information Technology Division to enter or edit a voice message, due to the relative complexity of the process.
   - The system does not have a direct connection from a play-back recorder to the ToneTalker interface board. Recording new or replacement messages into the system must be performed without background noise.
   - The system does not support editing of individual messages (dubbing, splicing, cutting, etc.). Complete messages must be "re-recorded" over existing messages.
   - The system does not have any features to control the volume or quality of the computer-generated voice (volume, treble/bass filters, etc.)
2. Operations Reliability and Maintainability
   - The system fails when no more space is available on the hard disk.
   - The system requires technical support to reorganize (de-fragment) files on the hard disk.
   - The system occasionally fails when a caller presses a touch-tone button several times in succession, or fails to detect the keying of a tone by a caller.[22]
   - The system does not detect caller disconnection until the current message is completed, thereby keeping the line open for more time than is required.
   - The system does not disconnect the line if the caller does not key a tone on the caller's touch tone telephone.
3. Operations Availability
   - The voice messaging system must be shut down to edit (replace) voice messages.
   - The voice messaging system must be shut down to reorganize disk files.

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[22] Several callers who contacted the researcher made this complaint.

4. Ease of Use
   - Maintenance of the ILS systems, as stated earlier, cannot be readily performed by non-technical staff of Alberta Health.
   - The systems do not provide a print-out of daily statistics. Staff manually record daily statistics and enter these values into a separate LOTUS-based reporting system.

SYSTEM REQUIREMENTS

In addition to correcting the above deficiencies, Alberta Health staff identified the following desirable requirements for the Information Line System (ILS):

- improved statistics gathering and reporting functions, which would eliminate the need for manually recording daily statistics;
- ability to conduct surveys using the ILS (e.g., obtain callers' evaluations of the service);
- operations of multi-line ILS services on a single microcomputer;
- capabilities of accumulating statistics on the geographic regions of originating calls;
- potential to increase the number of incoming lines without incurring substantial costs; and
- greater hard disk capacity, to reduce the occasions when file reorganization is required.

Other Information Lines in Canada

The equipment used for the British Columbia AIDS Information Line consists of 8 telephone lines and a computerized call sequencer which places over-flow calls in a queue until an educator is available. A cost-saving feature of the queuing process is its capacity to give preferential position to long distance calls. The computer is also programmed to record data on calls handled by the system. These data are used in monitoring call frequency and caller response patterns.

Literature

A management information system is usually used to track the number of callers, peak calling periods, types of calls, questions asked and resources referred to. The National AIDS Hotline in the United States uses an AIDS Information Package (AIP) to collect information about the requests and needs of callers. Among other uses, this information helps evaluate the training needs of information specialists and determine the effects of media exposure on call volume. Information specialists log various types of information about incoming calls, including questions raised, referrals made and requests for literature. Information is not directly solicited from callers; rather, information is recorded as a result of discussions taking place during the call.

Handling the volume of calls to the NAH is facilitated by an automatic call distribution device that routinely directs incoming calls to staffed work stations. The call management information provided by this device enables NAH to determine its staffing needs and evaluate staff efficiency.

WHAT TECHNOLOGICAL OPTIONS ARE CURRENTLY AVAILABLE MEETING THESE REQUIREMENTS?

Summary

An in-house system is preferable over the use of an external service bureau. Several vendors are available who provide MS-DOS based hardware and software systems meeting Alberta Health's requirements. Alberta Health may purchase a totally new system, in which case costs would be $3,500 - $4,000 for a two-line system using one of the existing computers; or $8,000 - $10,000 using a new microcomputer with greater speed and capacity. Alberta Health may also opt to upgrade the existing Tone Talker hardware and software at a cost of approximately $400.

Statistics on the geographic origin of callers can be provided by AGT (Customer Services).

Two basic approaches are available for Alberta Health's Information Line System (ILS):

- continued operations of an in-house system; and
- contracting to a messaging "service bureau" for operations of the ILS.

The latter approach involves contracting only for "delivery" of the messages, not for the message content, nor providing consultations by Nurse Educators. There are at least two service agencies in Edmonton that can offer message services - Edmonton Telephones "Talking Yellow Pages", and Canadian Telelink.

A message service bureau would provide the operational and technical support necessary to keep the system running efficiently. Alberta Health would maintain control over the messages, but any changes to the messages or set-up for an "electronic" survey would require coordination with the service bureau.

The message service bureau would charge for its services. Over time, the cost of the service bureau could exceed the one-time costs of an in-house system.

With an in-house approach, Alberta Health has the option of upgrading its current technology, or replacing the system with alternative technologies. In either case, Alberta Health could keep the current microcomputers, or move the two microcomputers to other functions and replace them with a more powerful microcomputer (PC/AT-386 or better).

Two vendor options were reviewed[23]:

1. BCB Technology Group of Woodbridge, Ontario has purchased the assets of BCB Sound and Reproductions, the supplier of the ToneTalker technology. The hardware and software has been improved since 1989, when Alberta Health purchased the second system. The improved technology now permits up to two ToneTalker interface boards to be installed in a single IBM-compatible microcomputer. (Three boards may be installed, if the diskette drive and controller are removed.) BCB Technology Group reports that the hardware and software are much more reliable.

   With the release of Version 3.5 (February, 1993), the software will provide "electronic studio" capabilities for editing voice messages (dubbing, splicing, etc.). The software also has interfaces which permit customer-written programs to operate in conjunction with the ToneTalker system. With this feature, the customer can, for example, collect and tabulate statistics, incorporate client surveys, and re-route calls to other telephones (if supported by the customer's PBX). In addition, the new software can record caller's messages (electronic voice mail).

   The cost of new ToneTalker interface boards (including software) is approximately $1,300 per board. BCB Technology Group supports an upgrade program where older ToneTalker boards (such as those currently in use at Alberta Health) may be upgraded and new software supplied at a cost of $180 per board.

   The alternative of upgrading the current ToneTalker hardware and software may be attractive for Alberta Health, due to the relatively low cost, and the opportunity of retaining most (if not all) of the custom-written statistics reporting software.

2. Several Edmonton-based companies can supply technology equivalent to or better than the ToneTalker system. One company, Enhanced Business Systems (EBS) of St. Albert (or their dealer, NovaCom of Edmonton) offers systems which support from 1 to 16 incoming lines, with software for message recording, message control, caller response and basic statistics. The company provides custom programming services to meet the customers' specific needs.

   EBS declares that their system could meet all the requirements as stated above, with the exception of reporting on the geographic location of incoming calls. (Their hardware can detect and decode the Call Display message, but they have not developed the software for this function.) The software includes basic statistics gathering and reporting, but may require custom-development to meet Alberta Health's specific requirements.

   The cost of a single-line interface board, with basic software is in the order of $1,000; a two-line board is $3,500 - $4,000; and a 4-line board is approximately $6,000. A complete 4-line system with microcomputer (PC/AT 386 with 100 megabytes of hard disk) would cost in the order of $8,000 to $10,000.

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[23] A number of other vendors with competing systems were also identified but not reviewed in detail.

Handling Geographic Identification of Incoming Calls

The current ILS cannot determine the point of origin of the incoming call and accordingly, cannot provide statistics on callers' geographic locations.

By using the survey capabilities of newer technology, Alberta Health could request that callers indicate their geographic areas (e.g., Edmonton - press "one", Calgary - press "two", northern urban - press "three", and so on). This approach may not be very reliable, and it may be annoying to the callers.

Although AGT and Edmonton Telephones now support "Call Display" (and one vendor, EBS, indicated a capability of collecting Call Display data), AGT reports that Call Display service is not available for 1-800 services. Moreover, if such a service were available, Alberta Health may not subscribe to it in order to be seen to protecting the anonymity of the callers. AGT Customer Services states that AGT can tabulate the geographic region of incoming 1-800 calls, and provide statistical reports on the source of calls to Alberta Health. For example, AGT can provide analysis of incoming calls which occur prior to and following a health promotion campaign. Arrangements can be made through the Executive Account Representative for the Government of Alberta (currently, Mr. Robert Lai at 486-4114).

Future of Pulse-Dial Services

As of January, 1993, the majority of telephone subscribers in Alberta have touch-tone services: 89.2 percent of Edmonton Telephones' lines and 82.2 percent of AGT's lines are touch-tone[24]. Neither company forces existing subscribers to convert from pulse-dial (rotary) to touch-tone, but all new subscription services are installed as touch-tone; if a current customer moves to a new residence, the telephone service is installed as touch-tone, even if the residence or the customer had pulse-dial service before. In time, all telephone services in Alberta will be touch-tone.

If a telephone subscriber has pulse-dial services, but uses a touch-tone telephone, the subscriber can still signal to the ILS using the touch-tone pad. The telephone companies do not have statistics on the number of touch-tone telephones which are connected to pulse-dial services.

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[24] This would appear consistent with user survey findings where 18% of callers said they hung up without using the recorded information system because they did not have a touch-tone phone.

WHAT IS THE MOST APPROPRIATE APPLICATION OF RECORDED AND LIVE METHODS OF INFORMATION DELIVERY TO PROVIDE THE DIFFERENT KINDS OF INFORMATION THAT PEOPLE NEED?

Summary

Information lines are the only acceptable or available option for some people. They are also an important link to service for some symptomatic people who might otherwise delay or avoid necessary medical treatment.

Information lines are gaining in acceptance, and appear to have potential for wider application than merely providing information, including advocacy, teaching of skills, counselling and post-counselling support. They also have the function to serve as laboratories for research into the effectiveness of alternative promotional campaigns and intervention techniques.

Both recorded and live methods of information delivery have their own unique and legitimate role to play in meeting the public's need for information, and can coexist with other sources of health education. By their nature, information lines serve a relatively wide audience, although marketing efforts will dictate to some extent who will be aware of and use the service. Recorded information systems are becoming more widespread, and new technologies provide opportunities to interact with callers in a more personal and interesting fashion.

Other Information Lines in Canada

The majority of information lines see their role as serving the information needs of a wide audience (as opposed to a narrow sub-group of the population). They typically see the service as providing general or specific information according to the knowledge level of the caller. Most also see their service as embracing both disease prevention and health promotion, although they were not pressed for their definitions of these concepts or the nature of the information provided in each area[25]. Some appear to take a more aggressive advocacy posture in promoting behavioural and lifestyle changes, which could account for their belief they are involved in health promotion.

In addition to confidentiality/anonymity, accessibility is considered one of the unique features of the service, both for those "in crisis" and for those who might not seek help because no other service (or none they trust) is available. It is also a convenient way for some to get information or to get clarification of (or a second opinion on) information they have received elsewhere. Finally, it is a means of providing information that is personalized to the person's situation in a way that other media cannot as readily do.

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[25] Only B.C. and the Healthline (Edmonton) provide extensive health-related information beyond AIDS and STDs.

Literature

Telephone information lines offer a channel of enormous potential for the dissemination of health information on a one-to-one basis that is hard to duplicate in terms of large-scale accessibility and personalization of information. The telephone is an affordable, easy-to-use, private, and almost universally available technology. People may be inclined to use a help line when seeking health information because they view the telephone's anonymity as non threatening and as a way to maintain some control in an unfamiliar area of knowledge. Anonymity may be especially important when dealing with the delicate subject matter of STD infection and AIDS. Anonymity seems to enable the caller to take larger risks in the expression of painful feelings more quickly than in a face-to-face setting.

Like the mass media, another technology frequently considered for its educational applications, information lines offer blanket coverage of the target audience, user anonymity and convenience of time and place. Interactive information lines are particularly attractive from a health education perspective because they have the flexibility to shape each message into a uniquely personal intervention. Help lines can be an effective and efficient tool for health education because:

- Information is given in a close relationship between the caller and the expert, making it possible to personalize its content and style, and to encourage individual responsibility towards the spreading of disease.
- Privacy is assured by anonymity, and this allows a reasonable degree of confidence for persons who may prefer not to expose their behaviours, or who may be uncomfortable dealing with traditional medical/health care services.
- The whole telephonic network offers easy and close access to information.
- The collection and analysis of statistical data on usage allows better definition of common answering modalities and the assessment of the changing patterns of need for other health education programs and health service delivery.

The literature suggests that telephone information lines might be serving as a critical link between symptomatic people and appropriate health services. The literature also indicates that information lines are just one of several information sources people typically utilize. Therefore, telephone information lines should be viewed as an adjunct to, rather than a replacement for, other sources of information. Many users of telephone information lines have stated that they did not know whom else to contact. This is an indication that telephone information lines may be providing a unique service.

Information lines do have some limitations, including: a lack of continuity in the information or the service provider; an absence of visual cues for the service provider; and the inability of the service provider to follow-up on specific cases. This is compounded by the fact that support services, such as counselling and anonymous HIV testing, may not be available for the service provider to refer callers.

Future Applications

The future holds many opportunities for exploring the proactive use of telephone information lines as a source of patient counselling, disease prevention and health promotion information, including information that might not have been contemplated by the caller and may be unrelated to their initial subject of inquiry.

The literature suggests that the functions which are currently being carried out by help lines need to be extended into new areas such as teaching of skills, providing behavior support or counselling callers. What is needed now is to explore the feasibility of expanding help lines to serve broader objectives in responding to the threat of AIDS and STD. Some questions which might be examined include:

- Can help lines be effectively used to help individuals change their behavior(s)?
- How can help lines be used to support individual behavior change?
- Can help lines be used to teach individuals new skills, such as putting on a condom correctly, or negotiating condom use or safer sex with a partner?
- Can help lines be strengthened to reach more of the difficult to reach populations?
- Can callers be encouraged to call back and connected to regular information line counsellors?

It should also be noted that telephone information lines have the potential to function as laboratories for communications research and hypothesis testing, as well as providing an important service to specific communities and target groups. For example, randomization of callers into a proactive intervention versus a usual-service control group can provide a strong basis for scientific evaluation of particular promotion or counselling strategies, especially when combined with a follow-up survey or other mechanisms for assessing outcomes. Included among the key communications issues that could be studied are:

- the efficacy of providing proactive behavioral counselling to population subgroups who call the help line for reasons unrelated to the behavioral counselling in question;
- the efficacy of various promotion campaigns and strategies to reach under-served populations, including subgroups that have traditionally underutilized telephone information lines.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Based on findings presented in the previous section, the following conclusions are made about the AIDS/STD Information Line:

- There is widespread support for an anonymous telephone information service to provide the public with access to information on AIDS and STD.
- Alberta Health enjoys strong credibility in providing this service.
- Public awareness of the Information Line is highest among those practicing risky behaviours. Findings underscored the importance of publishing the toll-free number in telephone books because many look there for service when the need arises. Mass media approaches (particularly television) are supported as an effective way to inform the public of the service.
- Non-users are not active information seekers and few report practicing risky behaviours. Information of interest to them is readily available from the Information Line.
- Use of the Information Line in Alberta is similar to other jurisdictions in terms of who calls, why they call, how often they call and what information or assistance they are looking for.
- The Information Line is mainly being used by people who see themselves at risk of infection. Users tend to be young, and over half reported practicing a behaviour that put them at risk of infection in the last 12 months. Users are also less well educated and more likely to report practicing risky behaviours than their non-user peers. Females use the service somewhat more than males, and are on average younger and more likely to consider themselves at risk than male users.
- Some callers use the service for disease prevention, looking for ways they can protect themselves from infection. Most users, however, called at the time they had a "problem" (e.g., a symptom or concern about a past behaviour), and most only called once. This suggests the Information Line is not actively used as a source of health promotion information; rather, it is being used primarily as a health assessment and referral service, and appears to be serving as an important link to treatment for symptomatic people. Some who urgently require reassurance and advice also use it as a "crisis line".
- Many users know of alternative sources of information and assistance but prefer the Information Line because it is convenient and anonymous. Rural residents were most likely to suggest they had no other alternatives. This finding confirms and supports the importance of the Information Line for residents outside major urban centres.
- The majority of users of the Information Line found the service to be helpful. They said they were reassured, better informed and better able to make decisions. Most indicated

they intended to take action as a result of the information they had received. These actions included seeking service or additional information, making a behaviour change or sharing information with others.

- Both live and recorded methods of delivering information are supported in Alberta. Most people expect and prefer talking to a person, but many appeared to like the option of using recorded messages, and most felt recorded messages are a good way to provide information on AIDS and STD. This "dual" delivery approach appears to differ from that taken by most other information lines in Canada and elsewhere; however, there is clear evidence that some users have strong preferences for one method over the other. This finding suggests that a single method would not adequately serve as broad a range of potential users.
- While there is a high level of satisfaction with the service provided by Nurse Educators, the exclusive use of nurses may not be essential. Most users are mainly concerned that the person providing the information be well-trained in the subjects and issues involved and do not insist upon formal medical training.
- Most callers try to use the recorded information system to access messages, particularly individuals from outside of Edmonton. Most also listen to one or more detailed messages. These findings underscore the importance of ensuring the system provides quick access to useful information.

  Unfortunately, two-thirds of those who used the recorded information system did not find what they were looking for, even those accessing more than one detailed message. A significant number had trouble using the system, or found it failed when they attempted to make selections. This is considered unacceptable for a service of this importance and volume of use. The recorded information system is nearing technical obsolescence. It is difficult to maintain, cumbersome to revise and increasingly prone to failure. It is unable to adequately meet the message giving and statistical requirements of the program. State-of-the-art technology can be acquired locally at a reasonable cost (i.e., under $10,000).

In summary, the AIDS/STD Information Line provides a valuable service to Albertans at risk of infection or currently symptomatic. The dual method of information delivery is appropriate and should be continued and improved.

RECOMMENDATIONS

We make the following recommendations in relation to the Recorded Information Service:

1. Alberta Health should replace the existing ToneTalker system as soon as possible with state-of-the-art technology. The new system should provide enhanced message-giving and statistical reporting capabilities, and permit greater integration between live and recorded methods of information delivery. Specifically, it should:
   - allow callers to be passed directly to a Nurse Educator by pressing a button on their phones without having to hang up and call another number;

- permit Nurse Educators to connect callers directly to appropriate recorded messages, and, after they have finished listening, reconnect them with the Nurse Educator if they wish to discuss matters further;
- allow callers holding for a Nurse Educator to access messages;
- permit callers to leave messages regarding their satisfaction with the recorded or live information services
- permit callers, when Nurse educators are unavailable, to leave questions in a private voice mail box with a computer-assigned number. Nurse Educators would leave answers in mail boxes for callers to retrieve at a convenient time.

2. Alberta Health should ensure that the toll-free number for the Information Line is prominently displayed in all telephone directories in the province.

3. Printed materials (including directory listings/advertisements) should provide an overview of recorded messages available to enable callers to more easily choose from message alternatives.

4. Messages should be delivered in a more lively and interesting style. Consideration should also be given to expanding the menu system to provide messages targeting specific sub-groups (e.g., male/female, adolescent/adult), with message content and style tailored to the unique situations and needs of each group.

We make the following recommendations in relation to the Live Information Service:

5. Alberta Health should consider extending live service into the evening hours, and possibly eliminate morning or early morning coverage.

6. Alberta Health should consider using paid non-medical staff to supplement or complement Nurse Educators. In addition to handling their share of calls, Nurse Educators would back up non-medical staff in situations where signs and symptoms are being discussed. (This measure should be pilot tested to determine whether callers respond negatively to non-medical personnel generally, or to being handed over from one operator to another).

7. In addition to providing facts and information, Nurse Educators should consider employing a more direct counselling approach. This might also include telephone follow-up, when appropriate, by calling back users would be willing to provide a number where they could be reached. (These measures should also be pilot tested to determine whether callers respond positively to a more proactive approach and find follow-up helpful in reinforcing or supporting agreed actions and behaviour changes.)

APPENDICES

APPENDIX A
EVALUATION QUESTIONS

ACCESS AND AWARENESS

1. What is the profile of people who access the line?
   - socio-demographics
   - risk status
   - how learned about line
   - motivation for calling (anxiety, information deficit, wanting referral, curiosity, etc.)
   - types of information sought (topics/subjects: disease prevention, health promotion)
2. What is the profile of people who do not access the line?
   - socio-demographics
   - risk status
   - awareness and knowledge of line (including free, confidential, AIDS+STD)
   - types of information sought (topics/subjects: disease prevention, health promotion)
   - reasons for not accessing (no perceived need, no awareness - line or telephone number, access barriers, information needs being met elsewhere, prefer anonymity)
   - circumstances they would want to call
3. What approach to information delivery do people prefer?
   - satisfaction with recorded information
   - preference for nurse educators or other health professionals/resource people
   - satisfaction with accessibility of nurse educators
4. How could the recorded information service be improved to encourage people who want information to use the line to get this information?
   - reasons for hanging up (wanted a person, had a barrier, looking for something else)
   - suggestions for improvement
5. How could awareness of the service be improved for those who want information and would call the line for this information?
   - barriers (directory listing, access to tone phones, privacy, language, technophobia)
   - need for specialized services
   - appropriateness of line to meet special needs
   - methods to improve awareness (advertising, agency brochures, etc.)

IMPACT OF INFORMATION

1. Is information being received (i.e., understood)?
   - information clarity, conciseness, timeliness
   - appropriateness of level of information

2. What has been the impact of information received?
   - meeting need for information or assistance
   - allaying anxiety
   - generating action (seeking medical services or referral, getting tested, etc.)
   - generating or reinforcing behaviour change

TECHNOLOGY

1. What are the current and future software and hardware requirements to operate the information line?
   - current system capabilities and weaknesses
   - software requirements (message-giving, statistics)
   - hardware requirements (capacity, processing capability)
2. What technological options are currently available meeting these requirements?
   - options and fit to requirements
   - costs
3. What is the most appropriate application of recorded and live methods of information delivery to provide the different kinds of information that people need and would call the line for?
   - appropriate balance between disease prevention and health promotion
   - need for general versus targeted information
   - appropriate niche for information line
   - lessons learned from current system experience

APPENDIX B
INSTRUMENTS

USERS - NURSE EDUCATOR SERVICE

1) How many times have you called the information line?
___first time
___number of times called

2) Where did you first learn that there was a 1-800 line you could call to get information about Sexually Transmitted Diseases and AIDS?

3a) Did you have any trouble finding the telephone number?
___yes
___no (GO TO 4)

3b) (If yes) What trouble did you have?

4a) Of the people you know, do you think that a few, some, or most are aware of the information line?

4b) What is the best way to make people like yourself and your friends aware of the information line?

5a) Why did you call the information line (PROBE)?
___thought I may have put myself at risk
___looking for information
___curious
___other reason_____

5b) What information or assistance you were looking for?

6a) Why did you call the 1-800 line instead of using a service in your community or area? (PROBE: only choice or preferred choice)
___didn't know where else to call/go
___no place to get information in my area
___no source in my area that I trust (credibility)
___embarrassed to use a local service
___preferred to get information anonymously
___liked convenience of calling rather than going out
___needed information right away
___other _____

6b) Did you know it was a service provided by Alberta Health?
___yes
___no

6c) Do you trust Alberta Health to provide good information?
___yes (GO TO 7)
___no

6d) (If no) Why not?

7a) Were you expecting to hear recorded information?
___yes (GO TO 8)
___no

7b) (If no) How did you feel when you found it was a recorded message?
___negatively _____
___positively _____
___no reaction
___don't recall

8a) When you first called the 1-800 line, did you stay on the line and try to use it to get the information you were looking for (i.e., did you push your phone buttons to select a recorded message) or did you hang up without selecting any of the recorded messages?
___stayed on the line
___hung up (GO TO 9)

8b) (If stayed on the line) Did you access only the AIDS (STD) information?
___only AIDS information
___only STD information
___both AIDS and STD information

8c) Did you listen only to the first general message or did you go further and access other more detailed messages as well?
___first message only (GO TO 8e)
___other messages
___don't recall

8d) How many messages did you listen to?
___number of specific messages accessed

8e) Did you find what you were looking for?
___yes (GO TO 8g)
___no

8f) (If no) Why not?
___didn't know which category to choose to get the specific information I wanted
___had trouble figuring out how to use the system
___system didn't seem to work properly
___information wasn't helpful/not what I was looking for (Why? Not specific enough?)
_____
___didn't understand what they were talking about (Why? Too technical, too fast?)
_____
___other _____

8g) How do you think the information in the recorded system could be improved to better meet your needs?

8h) How do you think the recorded message system could be improved?
(GO TO 10)

9) (If hung up without trying to use the line to get information) Why did you hang up?
___decided to call nurse educator instead
___just don't like recorded information
___was looking for something else
___didn't have a touch tone phone
___had trouble figuring out how to use the system
___other _____

10a) Do you feel recorded messages are a good way to provide the kind of information or assistance you were looking for?
___yes (GO TO 11)
___no

10b) (If no) Why not?

11) Why did you decide to phone the nurse educator?
___needed more detail
___couldn't find what I needed from the recorded information
___needed to discuss my situation with someone
___other _____

12a) Did you feel comfortable talking to a nurse?
___yes (GO TO 12c)
___no

12b) (If no) Why not?

12c) What kind of person would you feel most comfortable talking to?
___nurse
___male
___doctor
___other _____

12d) Instead of talking to a nurse, how do you think you would have felt talking to a volunteer who was well trained on AIDS and Sexually Transmitted Diseases, but had no medical background (PROBE FOR THEIR EXPECTATIONS REGARDING PROFESSIONAL STATUS/MEDICAL TRAINING REQUIREMENTS)?

13a) When you called the nurse, did you get through right away?
___yes
___no (line busy)
___no (no answer)

13b) Was it convenient to talk to the nurse when you did?
___yes (GO TO 14)
___no

13c) (If no) What time of day would it have been most convenient for you to call?
___morning (8:00am - 12:00pm)
___afternoon (12:00pm - 5:00pm)
___evening (5:00pm - 10:00pm)
___night (10:00pm - 8:00am)

14a) Did the information from the nurse educator help?
___yes (GO TO 14c)
___no

14b) (If no) Why not? (GO TO 15)

14c) (If yes) How did it help?

15) What do you think you will you do as a result of the information you received from the nurse?
___nothing
___seek service (kind)_____
___seek further information (from where) _____
___make behavior change (what) _____
___talk to partner (about what) _____
___other _____

16) How could the nurse educator service have been improved to better meet your needs?

I would like to ask you a few personal questions so that we can have a better understanding of who is using the information line? You don't have to answer any of the questions you don't feel comfortable with, but I want to assure you that all information is completely confidential.

17a) Are you male or female?
___male
___female

17b) How old are you?

17c) What language are you most comfortable speaking?

17d) What is the highest level of education you have completed?

___grade _____
___completed trade/technical certification
___some college/university
___completed college diploma/university degree

15e) What community do you live in?_____
(GO TO 16)

15f) Community location:

___north of Edmonton
___central (between Edmonton and Calgary)
___south of Calgary

15g) Community type:

___urban (town or city)
___rural (village, hamlet, reserve, settlement, farm area)

16a) In the last year, have you practiced unsafe sex or needle use? (Explain if necessary):

- having sex (vaginal, anal, oral) without a condom with someone whose sexual or drug history you aren't sure of, or
- sharing needles without cleaning them first with someone whose sexual or drug history you aren't sure of

___yes (END)
___no

16b) So you are confident you are at no risk of getting or spreading the AIDS virus or a Sexually Transmitted Disease?

___yes
___no

Thank you very much for your help.

USERS - RECORDED MESSAGES

1) How many times have you called the information line?
___first time
___number of times called

2) Where did you first learn that there was a 1-800 line you could call to get information about Sexually Transmitted Diseases and AIDS?

3a) Did you have any trouble finding the telephone number?
___yes
___no (GO TO 4)

3b) (IF YES) What trouble did you have?

4a) Of the people you know, do you think that a few, some, or most are aware of the information line?

4b) What is the best way to make people like yourself and your friends aware of the information line?

5a) Why did you call the information line?
___thought I may have put myself at risk
___looking for information
___curious
___other reason_____

5b) What information or assistance were you looking for?

6a) Why did you call the 1-800 line instead of using a service in your community or area? (CHECK ALL REASONS GIVEN)
___didn't know where else to call/go
___no place to get information in my area
___no source in my area that I trust (credibility)
___embarrassed to use a local service
___preferred to get information anonymously
___liked convenience of calling rather than going out
___needed information right away
___other _____

6b) Did you know it was a service provided by Alberta Health?
___yes
___no

6c) Do you trust Alberta Health to provide good information?
___yes (GO TO 7)
___no

6d) (IF NO) Why not?

7a) Were you expecting to hear recorded information?
___yes (GO TO 8)
___no

7b) (IF NO) How did you feel when you found it was a recorded message?
___negatively _____
___positively _____
___no reaction
___don't recall

8a) When you first called the 1-800 line, did you stay on the phone and try to use it to get the information you were looking for or did you hang up without selecting any of the recorded messages? (PROBE: DID YOU PUSH YOUR PHONE BUTTONS TO SELECT A RECORDED MESSAGE?)
___stayed on the line
___hung up (GO TO 11 - NEXT PAGE)

8b) (IF STAYED ON THE LINE) Did you access only the AIDS or only the STD information?
___only AIDS information
___only STD information
___both AIDS and STD information

8c) Did you listen only to the first general message or did you go further and access other more detailed messages as well?
___first message only (GO TO 8e)
___other messages
___don't recall

8d) How many messages did you listen to?
___number of specific messages accessed

8e) Did you find what you were looking for?
___yes (GO TO 8g)
___no

8f) (IF NO) Why not?
___didn't know which category to choose to get the specific information I wanted
___had trouble figuring out how to use the system
___system didn't seem to work properly
___information wasn't helpful/not what I was looking for (PROBE: WHY? NOT SPECIFIC ENOUGH?) _____
___didn't understand what they were talking about (PROBE: WHY? TOO TECHNICAL, TOO FAST?)_____
___other _____

8g) How do you think the information in the recorded messages could be improved to better meet your needs?

8h) How do you think the recorded message system could be improved?

9a) Did the information help?
___yes (GO TO 9c)
___no

9b) (IF NO) Why not?
(GO TO 10)

9c) (IF YES) How did it help?

10) What did you do as a result of the information?
___nothing
___seek service (WHAT KIND)_____
___seek further information (FROM WHERE) _____
___make behavior change (WHAT) _____
___talk to partner/friend (ABOUT WHAT) _____
___other _____
(GO TO 12)

11) Why did you hang up?
___decided to call nurse educator instead
___just don't like recorded information
___was looking for something else
___didn't have a touch tone phone
___had trouble figuring out how to use the system
___other _____

12a) Do you feel recorded messages are a good way to provide the kind of information or assistance you were looking for?
___yes (GO TO 13)
___no

12b) (IF NO) Why not?

13a) Would you rather have talked to a real person when you called, or did you like the option of using the recorded message system?
___recorded message system (GO TO 14)
___real person

13b) (IF REAL PERSON)Why?
___needed more detail
___couldn't find what I needed from the recorded information
___needed to discuss my situation with someone
___other _____

14a) Did you call the number to talk to the nurse?
___yes
___no (GO TO 15)

14b) (IF YES) Did you get through right away?
___yes
___no - line busy
___no - no answer

14c) Were you satisfied with the service you received from the nurse?
___yes (GO TO 15)
___no

14d) (IF NO) Why not?

I would like to ask you a few personal questions so that we can have a better understanding of who is using the information line? You don't have to answer any of the questions you don't feel comfortable with, but I want to assure you that all information is completely confidential.

15a) Are you male or female?
___male
___female

15b) How old are you? _____

15c) What language are you most comfortable speaking? _____

15d) What is the highest level of education you have completed?
___grade _____
___completed trade/technical certification
___some college/university
___completed college diploma/university degree

15e) What community do you live in?_____
(IF COMMUNITY GIVEN, GO TO 16)

15f) Community location:
___north of Edmonton
___central (between Edmonton and Calgary)
___south of Calgary

15g) Community type:
___urban (town or city)
___rural (village, hamlet, reserve, settlement, farm area)

16a) In the last year, have you practiced unsafe sex or needle use? (EXPLAIN IF NECESSARY):

- having sex (vaginal, anal, oral) without a condom with someone whose sexual or drug history you aren't sure of, or
- sharing needles without cleaning them first with someone whose sexual or drug history you aren't sure of

___yes (END)
___no

16b) So you are confident you are at no risk of getting or spreading the AIDS virus or a Sexually Transmitted Disease?

___yes
___no

Thank you very much for your help.

NON-USER QUESTIONNAIRE

Hello, my name is _____. I'm calling on behalf of Alberta Health in regard to a telephone hotline that the provincial government has set up to provide health information to the public. We would like to speak to (a male/a female) in your household between the ages of ____ and ____ about their awareness of the information line and the kinds of information they feel it should be providing.

Is there someone at home in that age range I could speak to?

- (IF THIS PERSON, PROCEED)
- (IF ANOTHER PERSON, REPEAT INTRODUCTION AND PROCEED)
- (IF PERSON NOT AVAILABLE, ASK WHEN YOU COULD CALL BACK TO REACH THEM)
- (IF NO ONE LIVING THERE IN DESIRED AGE RANGE, THANK AND END)

Would you help us out by answering a few questions? What you say will be confidential. You will not be asked to identify yourself, and you will not have to answer any questions you don't feel comfortable with.

1) Were you aware that there is a toll free 1-800 number you can call in Alberta to get information about AIDS or Sexually Transmitted Diseases?
   ___yes
   ___no (GO TO 4)

2) Have you ever called the number?
   ___yes (GO TO USER QUESTIONNAIRE - RECORDED MESSAGES)
   ___no

3) Where did you learn about the number? (E.G. FRIEND, SCHOOL, TV, PAMPHLET, PHONE BOOK, ETC)

4) Where would you look to find the number if you wanted to call right now?

5) Of the people you know, do you think that a few, some or most are aware of the information line?
   ___few
   ___some
   ___most
   ___don't know

6) What is the best way to make people like you and your friends aware of the information line?

7) Do you think there is a need for an anonymous toll free information line for the general public to get information on AIDS and Sexually Transmitted Diseases?
   ___yes
   ___no (GO TO 9)

8a) Do you trust Alberta Health to provide good information on this subject?
___yes (GO TO 9)
___no

8b) (If no) Why not?

9a). Are you satisfied that you know everything you need to about AIDS or Sexually Transmitted Diseases?
___yes (GO TO 10)
___no

9b) What kind of information would you be interested in?

9c) (IF NO ANSWER TO 9b, ASK) Would you be interested in information on any of the following topics:
___how AIDS/STD are spread
___behaviours that are risky
___safer ways to have sex
___safer ways to inject drugs
___how to discuss safe sex with your partner
___information about getting tested
___other _____

10a) If you needed to, where would you go to get information or advice on AIDS or Sexually Transmitted Diseases (E.G. DOCTOR, HEALTH UNIT, FRIEND, LIBRARY, ETC)?

10b) Would you feel comfortable phoning an anonymous toll free number to get information or advice on AIDS or Sexually Transmitted Diseases?
___yes (GO TO 11)
___no

10c) Why not?
(GO TO 18)

11) Do you have easy access to a push button - touch tone phone (IF NECESSARY, ILLUSTRATE BY PUSHING YOUR TELEPHONE BUTTONS)?
___yes
___no

12) Could you easily find a private spot to make the phone call?
___yes
___no

13) What time of day would be most convenient for you to call?
___morning (8:00 - 12:00)
___afternoon (12:00 - 5:00)
___evening (5:00 - 10:00)
___night (10:00pm - 8:00am)
___any time

14) How would you feel if you called the toll free line and were asked to choose from a selection of pre-recorded messages on various topics?
___negatively
___positively
___no reaction

15) Do you think you would be likely to get good information from a recorded message?
___yes
___no

16) How would you feel if you called and a real person answered?
___negatively
___positively
___no reaction

17) Would you rather talk to a real person right away, or would you like the option of listening to recorded messages first?
___real person right away
___recorded message option
___either OK

I would like to ask you a few personal questions so that we can have a better understanding of who does and doesn't use the information line. You don't have to answer any of the questions you don't feel comfortable with, but I want to assure you that all information you provide is completely confidential.

18a) Are you male or female?
___male
___female

18b) How old are you? _____

18c) What language are you most comfortable speaking? _____

18d) What is the highest level of education you have completed?
___grade _____
___completed trade/technical certification
___some college/university
___completed college diploma/university degree

18e) What community do you live in?_____
(IF COMMUNITY GIVEN, GO TO 19)

18f) Community location:
___north of Edmonton
___central (between Edmonton and Calgary)
___south of Calgary

18g) Community type:
___urban (town or city)
___rural (village, hamlet, reserve, settlement, farm area)

19a) In the last year, have you practiced unsafe sex or needle use? (Explain if necessary):
- having sex (vaginal, anal, oral) without a condom with someone whose sexual or drug history you aren't sure of, or
- sharing needles without cleaning them first with someone whose sexual or drug history you aren't sure of

___yes (END)
___no

19b) So you are confident you are at no risk of getting or spreading the AIDS virus or a Sexually Transmitted Disease?
___yes
___no

Thank you very much for your help.

NURSE EDUCATOR INTERVIEW GUIDELINE

- Do you get the sense that people are calling the line because it's the most convenient source, or they don't have any other options available locally, or they aren't aware of where they can go to get information? Or is anonymity the main reason they call?
- How are they learning about the service? Is it hard to locate?
- Do they indicate the service is well known among their peers?
- In your experience, is there a typical profile or set of profiles of people who call you?
- Would the majority be at risk? What risk behaviours do you encounter most frequently?
- Why are they calling? What proportion call for general information, for advice, for reassurance? Has this changed over the years? How?
- What kind of information are they most frequently looking for? Has this changed over the years? How?
- What do they say about the recorded message system? What problems do they relate? Do some find it useful? Do they ever tell you how it could be improved? How?
- Do you see any kinds of information you routinely provide that could feasibly be given using a recorded message? What is the best role for the recorded message system?
- What do you feel is unique or intrinsically different about talking to a real person that a recorded system can't do as well?
- I understand people often call numerous times, and some establish a "relationship" of sorts with the nurse educator. What's going on here?
- What is your role? Are you there merely to provide facts so callers can make informed choices? Do you see yourself as advocates of behaviour change? As counsellors or therapists? As role models?
- Do you ever find yourself restricted by policy or professionalism from entering into the kind of relationship that callers are expecting?
- Do you sense that some would prefer talking to someone else? A male? A doctor?
- Do some find it inconvenient to call during business hours? Why? When would they prefer to call?
- Are people generally satisfied? Do you get complaints or expressions of dissatisfaction from callers? In what situations is this likely to occur? How could this be alleviated?
- How do you define success? What kinds of things would you see as successful outcomes from your service? Do you feel confident you are helping callers? Few? Most?
- How do you think the service could be improved? More training? Different role?
- Any other comments or suggestions?

OTHER INFORMATION LINES

General

1. What is the nature of the service?
   - toll free access?
   - entire province or just community?
   - pre-recorded messages (get contact name/number)
   - live information specialists
2. Who is calling the line?
   - demographic/risk profile (what info collected?)
   - general public or specific groups (which?)
   - health or education providers
3. Why are they calling?
   - most convenient source
   - only source available/aware
   - embarrassed
   - prefer confidentiality/privacy
4. What are they looking for?
   - information/facts
   - publications
   - advice
   - reassurance
   - referral
5. Who is not calling and why?
   - demographic profile
   - barriers
   - needs met in some other way
   - no needs
   - no awareness
6. Is the service accessible by all people in the province?
   - rural/remote
   - tone vs pulse
7. Do you provide services to special needs groups? How?
   - hearing impaired
   - other languages or cultures
   - other
8. How do you promote awareness of the service? What methods are most cost-effective?

9. What do you see as the role of the information line in providing information to the public?
   - wide vs narrow target audience
   - general vs specific information (can they provide detailed info?)
   - health promotion vs disease prevention information
   - relationship to other information services - unique role of help lines
   - potential role - other uses?

Information Specialists

10. Who answers the calls?
    - qualifications
    - hours of operation
    - training and quality assurance
    - use of volunteers
11. What are people calling for?
    - most frequent topics
    - reassurance
    - referral
12. Do people call more than once? Why?
    - same topic/didn't understand
    - progression in message/action

Recorded Messages

13. What technology are you using? (Vendor of hardware/software)
    - major functions and features (including statistics)
    - capital and operating costs
14. Hours of operation?
15. Do you have a lot of people hanging up during the introduction? Why?
    - expecting/looking for something else
    - technophobia
    - language or comprehension barriers
16. What have you done (or are thinking of doing) to encourage people to listen through to the end of the messages?
17. What information is being provided by the system?
    - topics
    - language level/degree of detail
18. What messages are people listening to (most frequent topics accessed)?
19. Do you know if people are satisfied with the recorded information? Or do they prefer talking to a live information specialist?

Impact

20. Do you mainly provide information, or do you also advocate/promote behaviour change?
21. What are you trying to achieve?
    - knowledge/attitude change
    - reassurance
    - action (e.g., seek medical treatment, testing)
    - behaviour change (e.g., talk to partner, try safer sex)
22. What results have you observed?
23. What kinds of messages seem to be most effective?

VENDOR INTERVIEW GUIDELINE

- "user-friendliness" features that allow users to maintain the system without technical/programmer assistance
- hardware requirements
  - single vs multiple computers
  - operating system (e.g., DOS, UNIX)
  - processor speed and disk capacity
- telecomm interface
  - physical connection requirements
  - number of lines/callers supported
  - call management features
- menu structure
  - programming
  - user control features
- recording new messages
- recording user comments or questions
- tracking statistics on calls and system usage

APPENDIX C
RECRUITMENT MESSAGE

(Female interviewer's voice temporarily added to recorded message system)

Welcome to the AIDS/STD Information Line.

In a moment you will hear how to use this line to get information on AIDS or Sexually Transmitted Diseases.

But first, I'd like to ask you a favour.

Every month over 2,000 people from across Alberta call this line because they need answers to questions about AIDS or Sexually Transmitted Diseases.

That's a lot of people, so it's important to know if we're meeting your needs and how you think the service can be improved.

My name is Pam. Please call me after you have used this line and tell me how it went. Good or bad, we need to know.

The call is free and you won't be asked to give your name.

My number is 1-800-565-8081.

Please call me when you're done. That's 1-800-565-8081.

Thanks for your help.

Now, please stay on the line for instructions on how to get the information you are looking for.

APPENDIX D
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